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ABSTRACT

This booklet provides information on environmental issues in an easy-to-read format for elementary students. The booklet progresses from "A to Z" alphabetically explaining an environmental problem and suggesting ways students can be actively involved in addressing the problem. (EH)

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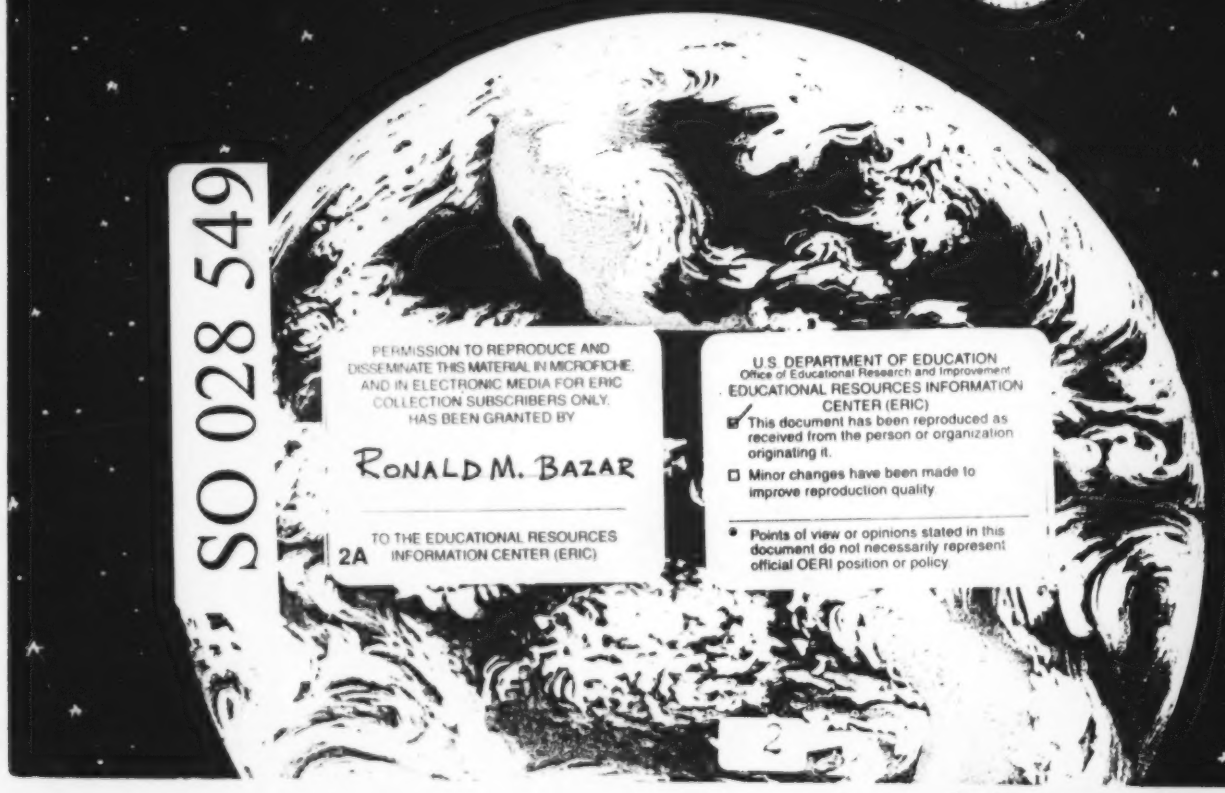
Good Planets
Are Very Hard To Find!

Kids' Ecology Book

Grades 3-5
Ages 8-11



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Kids' Ecology Book

Good Planets Are Very Hard To Find!

For Nicholas A. Famularo,
another book for his fine library.

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Ronald M. Bazar

Illustrated by: Nola Johnston

Edited by: Paul George, director, Western Canada Wilderness Committee

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INTRODUCTION

Take a deep breath. You have inhaled air that was breathed out by other people, by dogs and cats, by trees and birds.

Now drink a glass of water. Some of it evaporated from the world's oceans, some from tropical forests and some from the prairies.

Think about the food you eat - milk, bread, rice, carrots, hamburgers - all of it has come from a plant or an animal. So you can see we are connected to all the rest of nature and we need nature to stay strong and healthy.

Do you go on hikes and camping trips? Have you seen a forest or wild animals like whales and deer? It's fun to experience nature, isn't it? But now nature needs our help. We have to protect the air, the oceans, the soil. We have to save the birds and animals and forests so Mother Earth will remain strong and healthy.

This planet is our home and you can do something to keep it the beautiful place it has always been. For a start, you can read this book and learn about the environment from A to Z.

Dr. David T. Suzuki

Note to reader: *Italicised* words are defined in this book.

Text printed on recycled paper.

A is for...

AMAZON RAINFOREST.

Rainforests are forests that grow in places where it rains most of the year. If all the rain that fell in a rainforest in one year was measured, the *water* would more than cover an eight foot tall giant standing on his tip toes!

The Amazon Rainforest grows in South America. It is the largest rainforest in the world. Unfortunately, some people are cutting down this rainforest to make room for farms and cattle ranches.

Many people are trying to save the Amazon Rainforest. They want to stop the *trees* from being cut because this huge rainforest helps keep the air on the *planet* fresh. They want to save the Amazon Rainforest because it is the home of many native people and because thousands of different kinds of plants and *animals* live in the Amazon jungle and nowhere else in the world. If the Amazon Rainforest is destroyed these plants and animals will become *extinct* and be gone forever.

I can learn more about the Amazon Rainforest.

ANIMALS.

All animals breathe oxygen. Animals cannot make their own food like plants do. They have to find their food. There are animals that eat plants and animals that eat other animals.

There are more kinds of animals in the world than you can imagine! There are animals that fly, crawl, run, swim, jump

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and some that hardly move at all. Some animals live on farms and some are *wild*. Some live with people as pets and some live in zoos. People are a kind of animal too.

Even though each kind of animal looks different and lives in a different place, every animal needs oxygen to breathe, enough food to eat and a place to raise its young. We can help animals by being kind to them and protecting the places where they live.

I can protect wild animals by not disturbing their natural homes.

ATMOSPHERE.

The air around Earth is called the atmosphere. The atmosphere is made up of different kinds of gases. Oxygen and carbon dioxide are two important gases found in the atmosphere.

Animals breathe in oxygen and breathe out carbon dioxide. Plants do the opposite. They breathe in carbon dioxide and breathe out oxygen! That's one way plants and animals help each other live together on Earth.

When fumes from cars and smoke from factories mix with the clean air in the atmosphere the air becomes polluted. Air *pollution* is not healthy for living things. That's why we must keep our atmosphere clean and fresh.

I can walk, ride a bike or take a bus whenever possible.

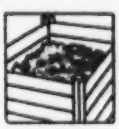
Black Caiman
(Endangered)

B is for...

BIODEGRADABLE.

When things that are buried or left on the ground rot, they are biodegrading. Leaves are very biodegradable because they rot very quickly. Glass bottles do not biodegrade at all. Most kinds of plastic are not very biodegradable and they can take thousands

of years to rot away. Because they are not very biodegradable, plastic and glass should be *recycled*. Kitchen scraps, like potato peels and banana skins, and leaves and grass cut from lawns are very biodegradable. They should be put in a *compost* pile.

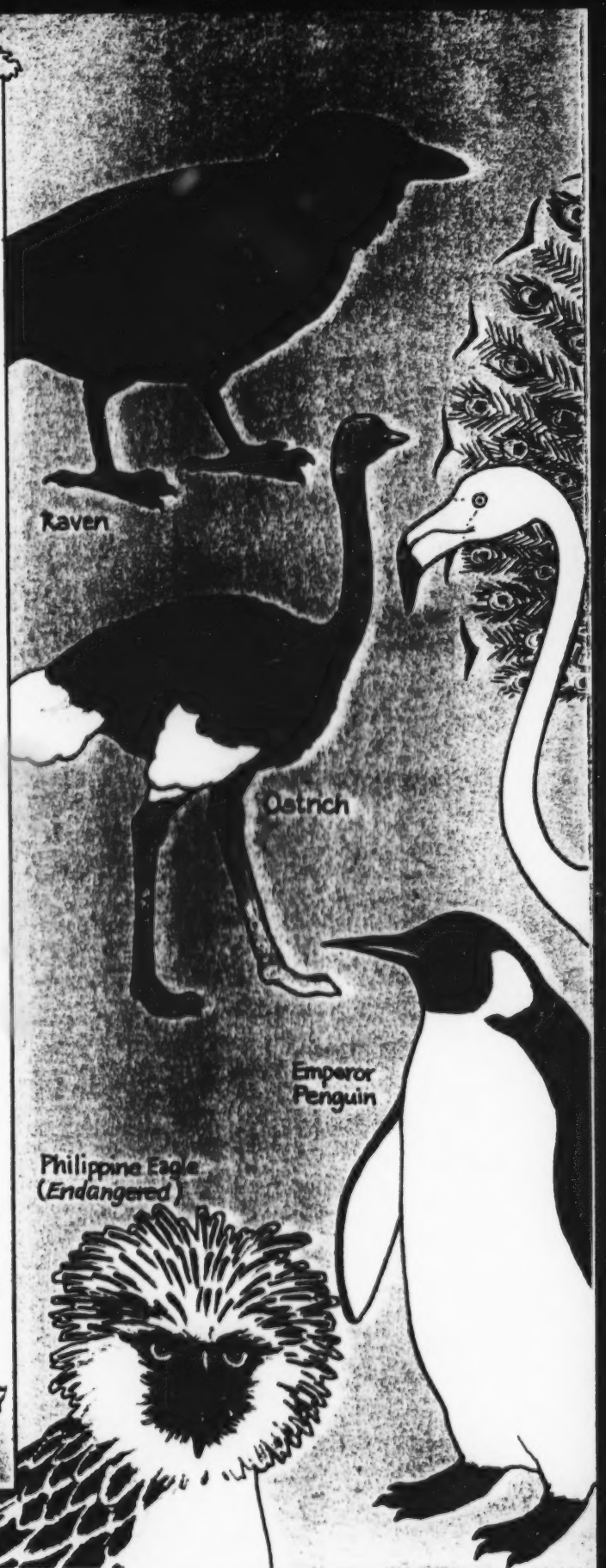


I can compost things that are biodegradable.

I can recycle things that are not biodegradable.

BIOSPHERE.

The biosphere is the land, water and air around Earth where all plants and animals, including you, live. The biosphere contains all life on Earth.



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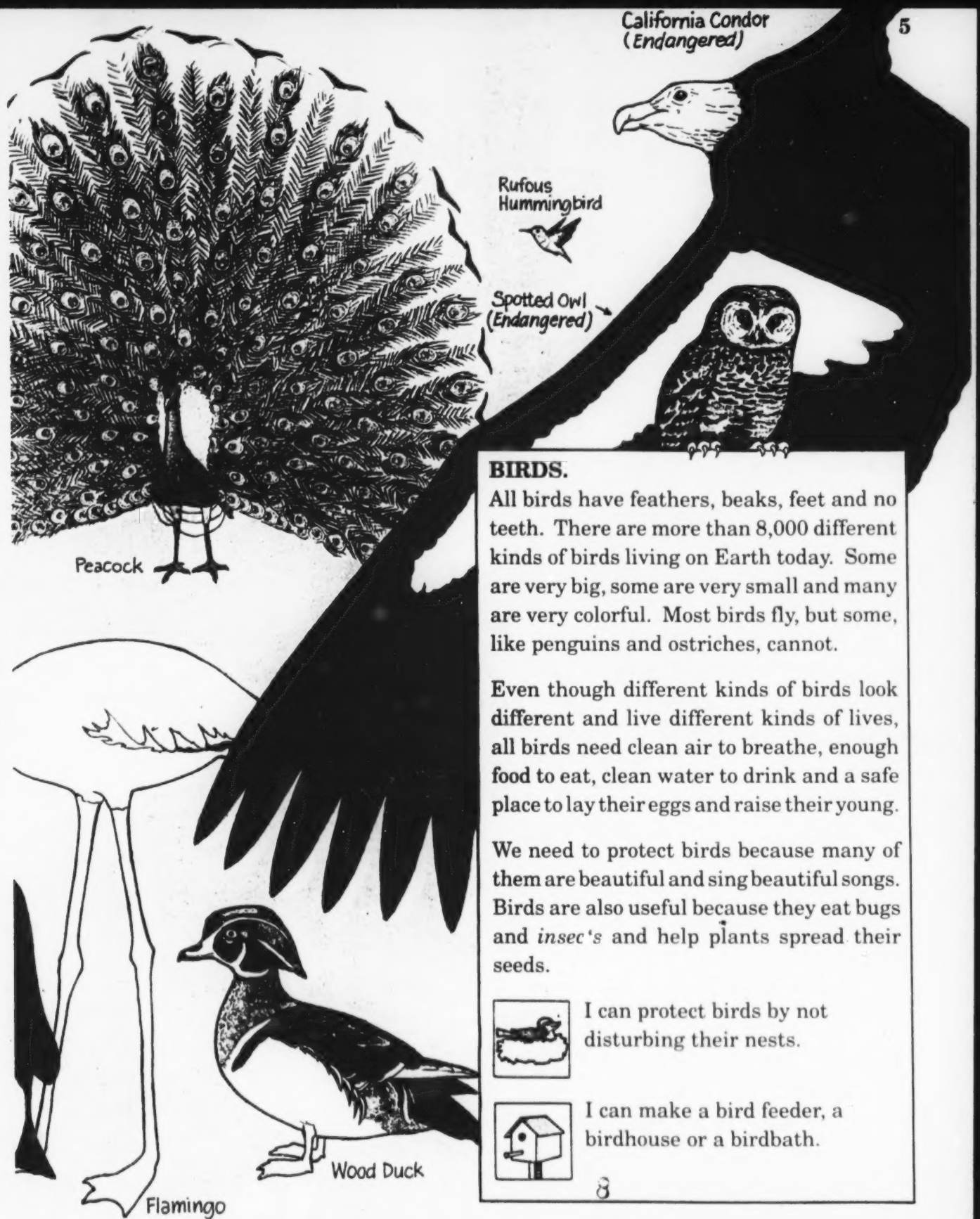


BIRDS.

All birds have feathers, beaks, feet and no teeth. There are more than 8,000 different kinds of birds living on Earth today. Some are very big, some are very small and many are very colorful. Most birds fly, but some, like penguins and ostriches, cannot.

Even though different kinds of birds look different and live different kinds of lives, all birds need clean air to breathe, enough food to eat, clean water to drink and a safe place to lay their eggs and raise their young.

We need to protect birds because many of them are beautiful and sing beautiful songs. Birds are also useful because they eat bugs and *insec's* and help plants spread their seeds.

I can protect birds by not disturbing their nests.

I can make a bird feeder, a birdhouse or a birdbath.

C is for...

CLEAN-UP.

Sometimes cleaning-up is hard work, but when it's done it's worth it. When we clean up together it's much easier, it goes faster and it can even be fun. For many years people have *polluted* Earth. Now it's time for everyone to help clean it up!

COMPOST.

Compost helps make soil rich and healthy. You can make compost by *recycling* your kitchen scraps, leaves and cut grass. It's easy. This is how you do it:

1. Find a place outside to put a compost box.
2. Build a box, or buy one, to keep your compost in and animals away.
3. Whenever you have food scraps, leaves and garden clippings, put them into the compost box.
4. Turn and mix everything in the compost box two times a month.

Soon the kitchen scraps, leaves and cut grass will become warm and rot. Now you will have rich, brown compost, a healthy *garden* food. When you mix your compost into the soil around your *vegetable* and flower plants they will grow faster, bigger and stronger.

Nature's way of recycling is to rot or *biodegrade* things. You are using nature's way of recycling when you make compost.

I can compost my family's kitchen scraps, leaves and cut grass.

CONSERVATION.

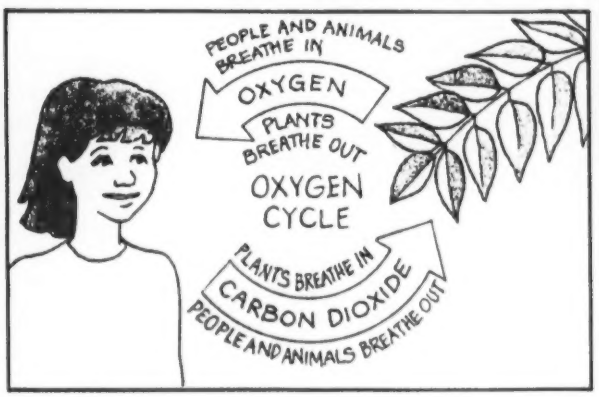
When people use things wisely and save for the future they are practising conservation. People must learn to conserve so there will be enough for everyone now living on our *planet* ...and for their kids ...and their kids ...and their kids ...forever.

I can conserve water by turning it off when I am not using it.

I can conserve electricity by turning off lights when I don't need them.

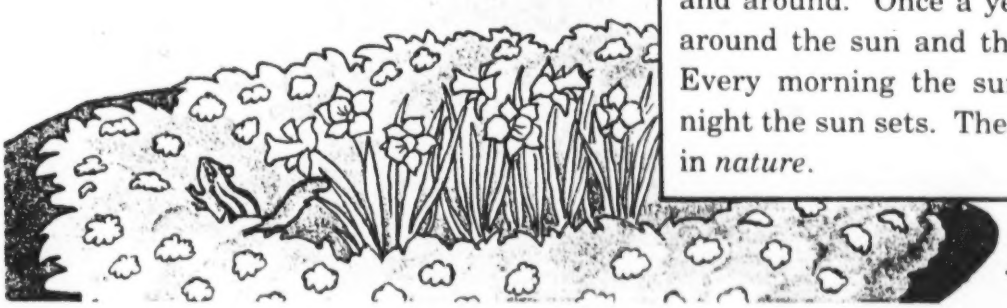
I can conserve metals by recycling cans.

I can conserve gas by walking, riding a bike or taking a bus instead of riding in a car.



CYCLES.

Things that happen over and over again go in cycles. A bicycle wheel cycles around and around. Once a year Earth revolves around the sun and the seasons change. Every morning the sun rises and every night the sun sets. There are many cycles in *nature*.



D is for...

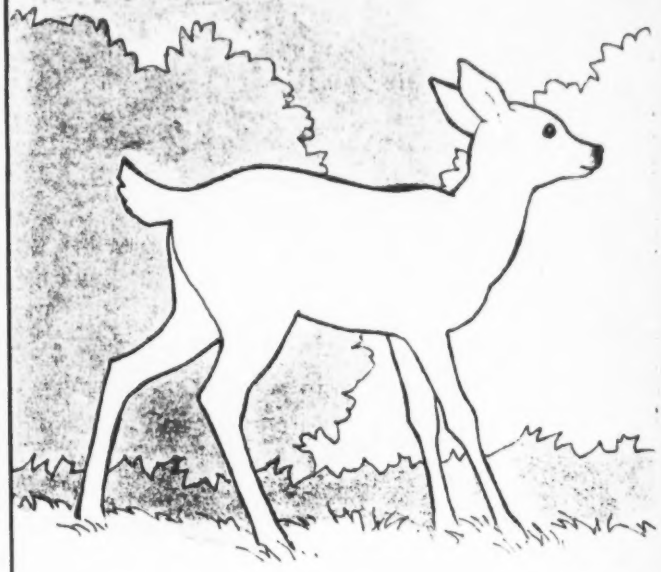
DEFORESTATION.

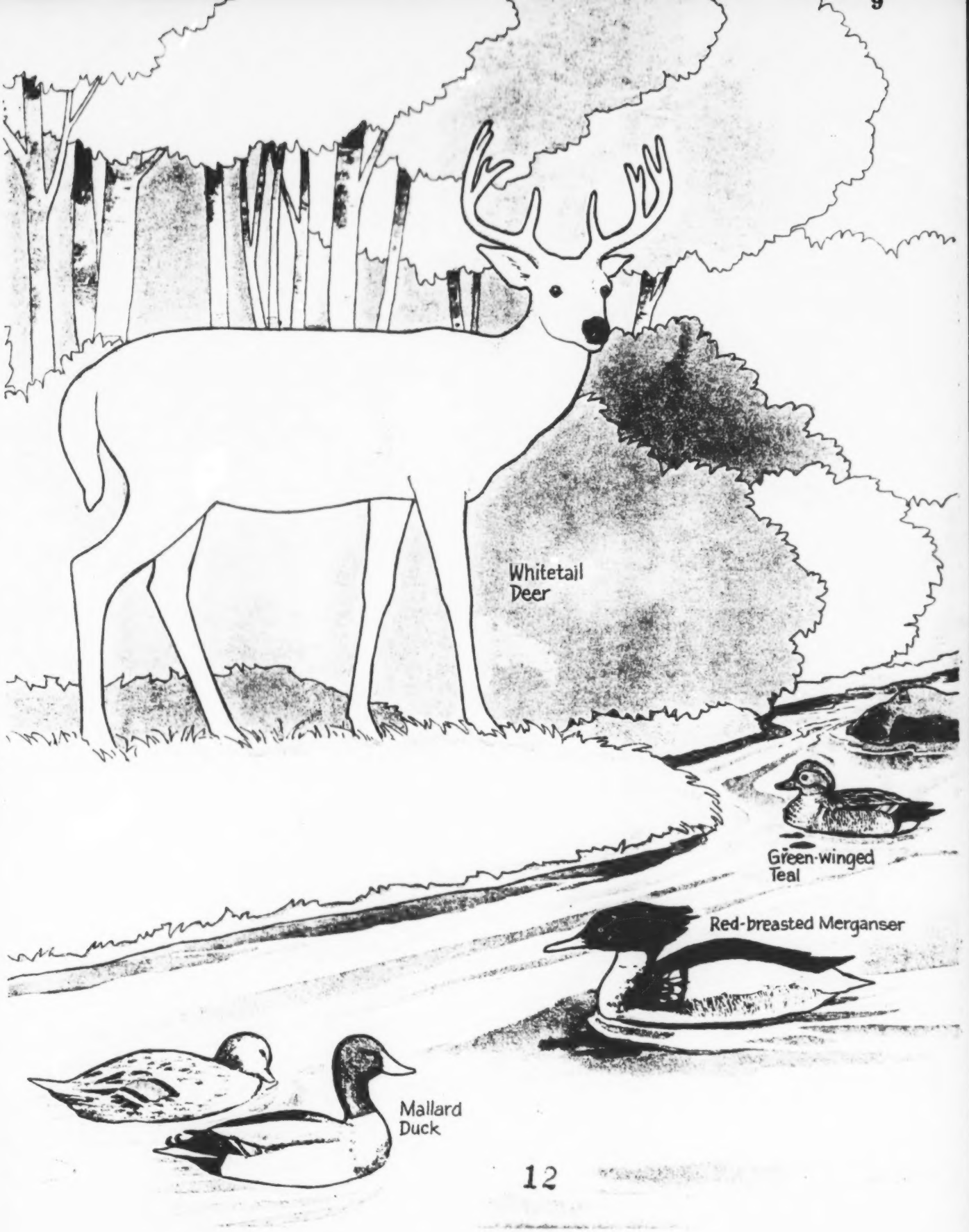
A place becomes deforested when the *forests* that grow there are cut down or destroyed and do not grow back. Most deforestation happens when people cut forests to make room for cities, farms and cattle ranches. Deforestation also happens when forests are cut down for wood or for making paper and new *trees* are not replanted properly.

When land has been deforested and the trees are gone the roots that hold the soil in place rot away. Without roots, *rain* can wash the soil away and wind can blow it away. Without enough soil it is hard for new trees to grow. People must be very careful to prevent deforestation.

I can learn more about deforestation around the world.

I can plant a tree.




Whitetail
Deer
Green-winged
Teal
Red-breasted Merganser
Mallard
Duck

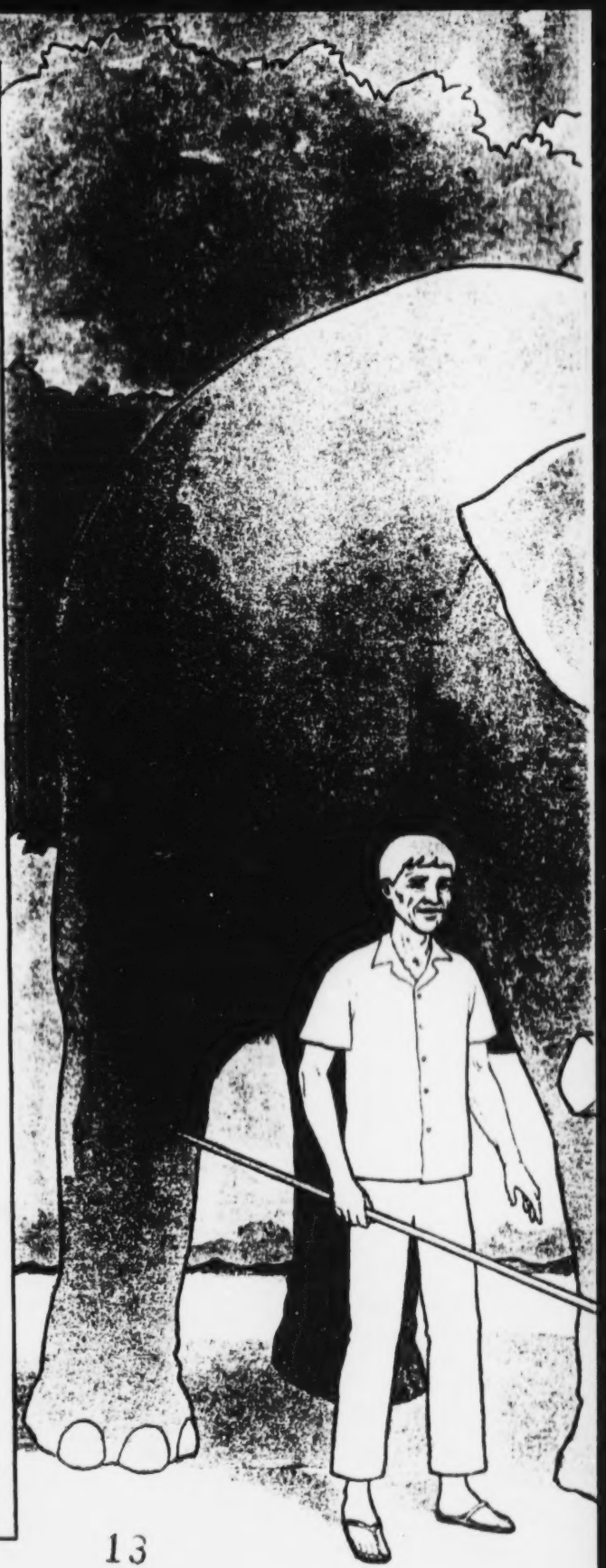
E is for...

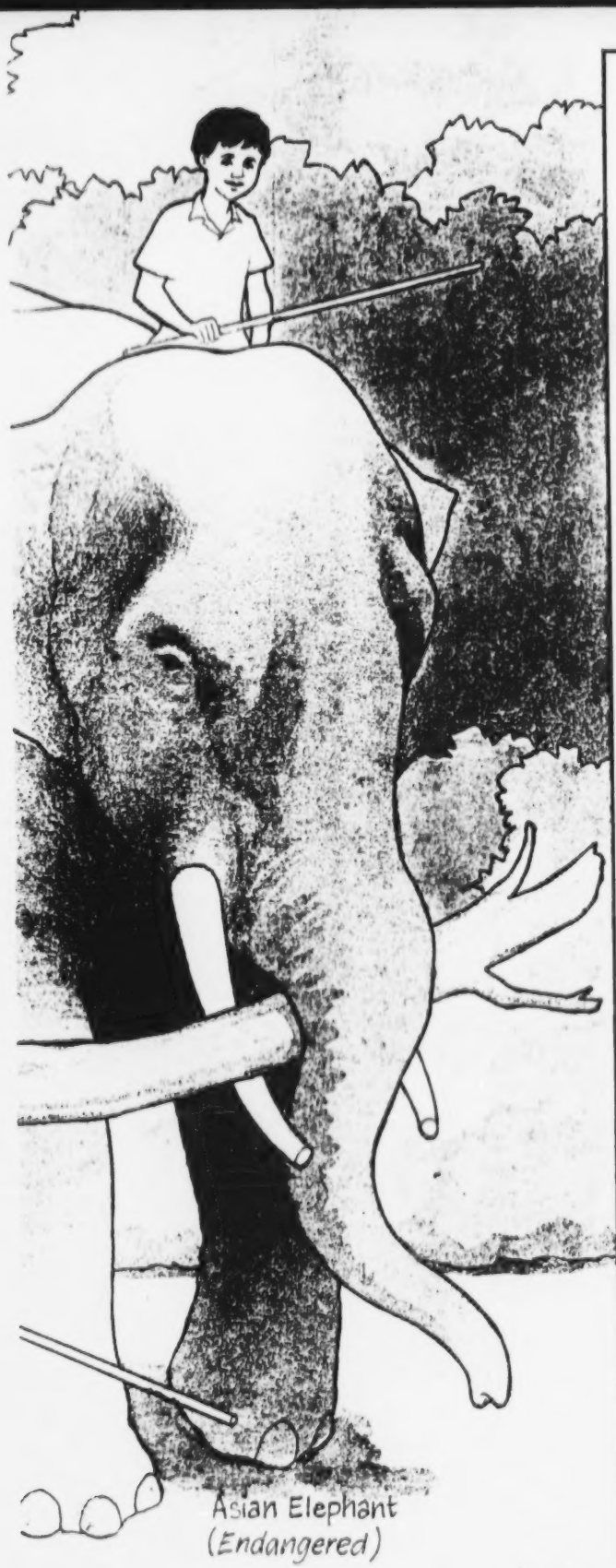
ECOLOGY.
You are learning about ecology when you learn how different kinds of plants and *animals* live together, and find food and places to live and grow. People can study the ecology of the plants and animals living in a large area like a desert or a *forest*, or a small place like a pond or stream. It is important to learn about ecology so you can understand how all plants and animals live together and help each other survive on our special *planet* Earth.

ELEPHANTS.
Elephants are the largest land *animals* living on Earth today. They live in Africa and Asia. Some people kill elephants and sell their tusks to be made into expensive ivory jewelry and carvings. Too many elephants are being hunted. There are very few elephants left and they are *endangered*. Unless people stop killing elephants, these powerful and smart animals will become *extinct* and be gone forever.

I can decide never to buy anything made of ivory including jewelry and carvings.

ENDANGERED.
When every year there are fewer and fewer of a certain kind of plant or *animal* we call that plant or animal endangered. Too many animals, like *elephants* and rhinoceroses, are now endangered. Because they are endangered we need to work hard to protect





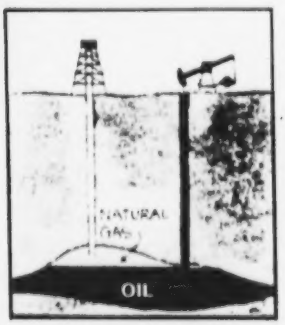
Asian Elephant
(Endangered)

them and the places they live or they might all die. If that happens they will become *extinct* and will be gone forever.

ENERGY.

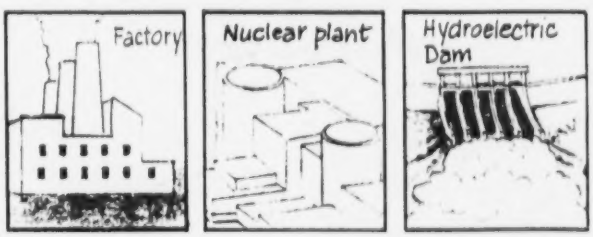
Energy makes everything work and move. Your body gets its energy from the food you eat and uses it to keep you warm and active so you can run and play and learn new things.

Plants use the sun's energy to make food. Animals eat plants to get food energy. The next time you jump for joy don't forget that the energy from sunshine is giving you the bounce!

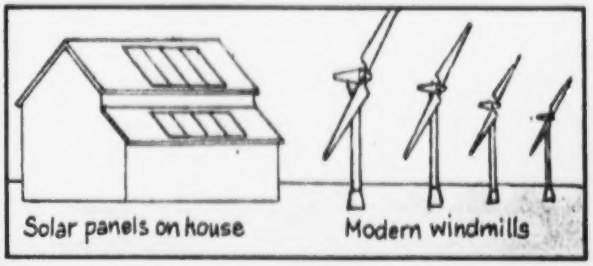


Cars use the energy that is stored in gasoline. Gasoline is made from *oil* that is pumped out of the ground. Many houses are heated with oil and natural gas.

TV's, radios, computers and air conditioners work by using electrical energy, called electricity. People make electricity many ways. Sometimes electricity comes from factories that burn oil and coal. Sometimes it comes from nuclear reactors that use the energy from atoms. Sometimes it comes from water falling over dams into machines called hydroelectric generators.



All electrical energy costs money to make, uses *resources* and makes some *pollution*. Wind and solar energy are forms of energy that can be used to make electricity with almost no pollution.



We must save energy so that there will be enough for everyone. When we save energy we also reduce pollution.

I can turn off lights I don't need.

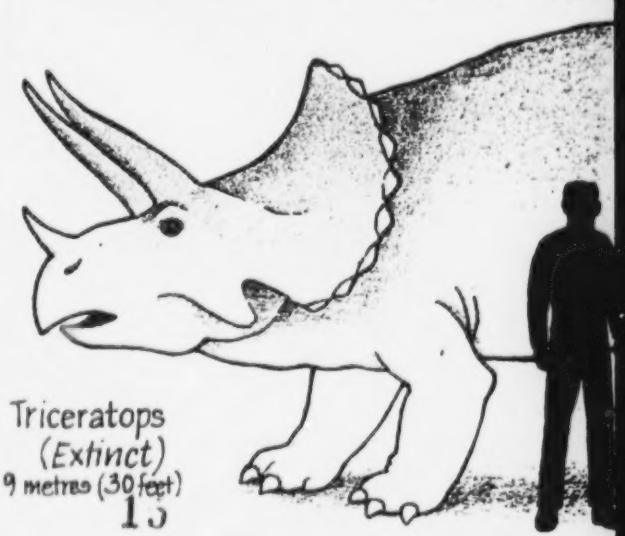
I can turn down the thermostat on the furnace.

I can keep doors and windows closed when it is cold out.

I can conserve gas by walking, riding a bike or taking a bus instead of riding in a car.

ENVIRONMENT.

Look all around. You are surrounded by your environment. Everything you see, hear or smell is part of your environment. The air you breathe, the *water* you drink and the food you eat are all part of your environment. It is important to protect every part of your environment so you can live a healthy life.



EXTINCT.

When the very last dinosaur died and there were no more dinosaurs living on Earth, the dinosaurs became extinct. They were gone forever. When the last one of any kind of *animal* dies, that kind of animal becomes extinct. Today, many animals could become extinct because they are being hunted too much and because the places where they live are being destroyed.

Many plants might also become extinct because people are destroying the places where they grow to make room for cities, farms and cattle ranches. When a plant or animal is in danger of becoming extinct it is called *endangered*. We must remember that every different kind of animal and plant is important.

I can decide never to buy anything made of ivory including jewelry and carvings.

I can decide never to buy furs or feathers from endangered animals.

I can learn more about endangered plants and animals and I can help protect them.

F is for...

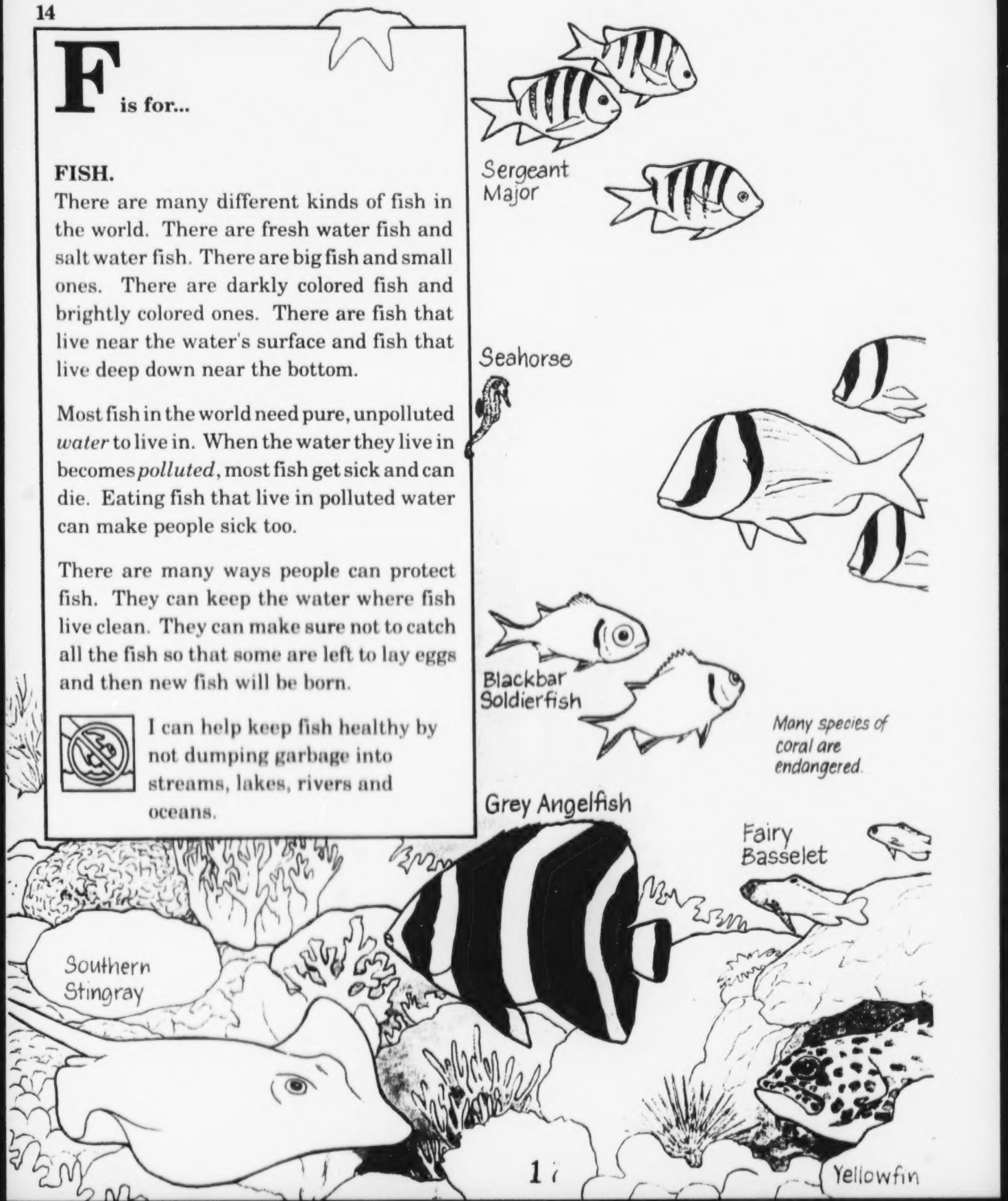
FISH.

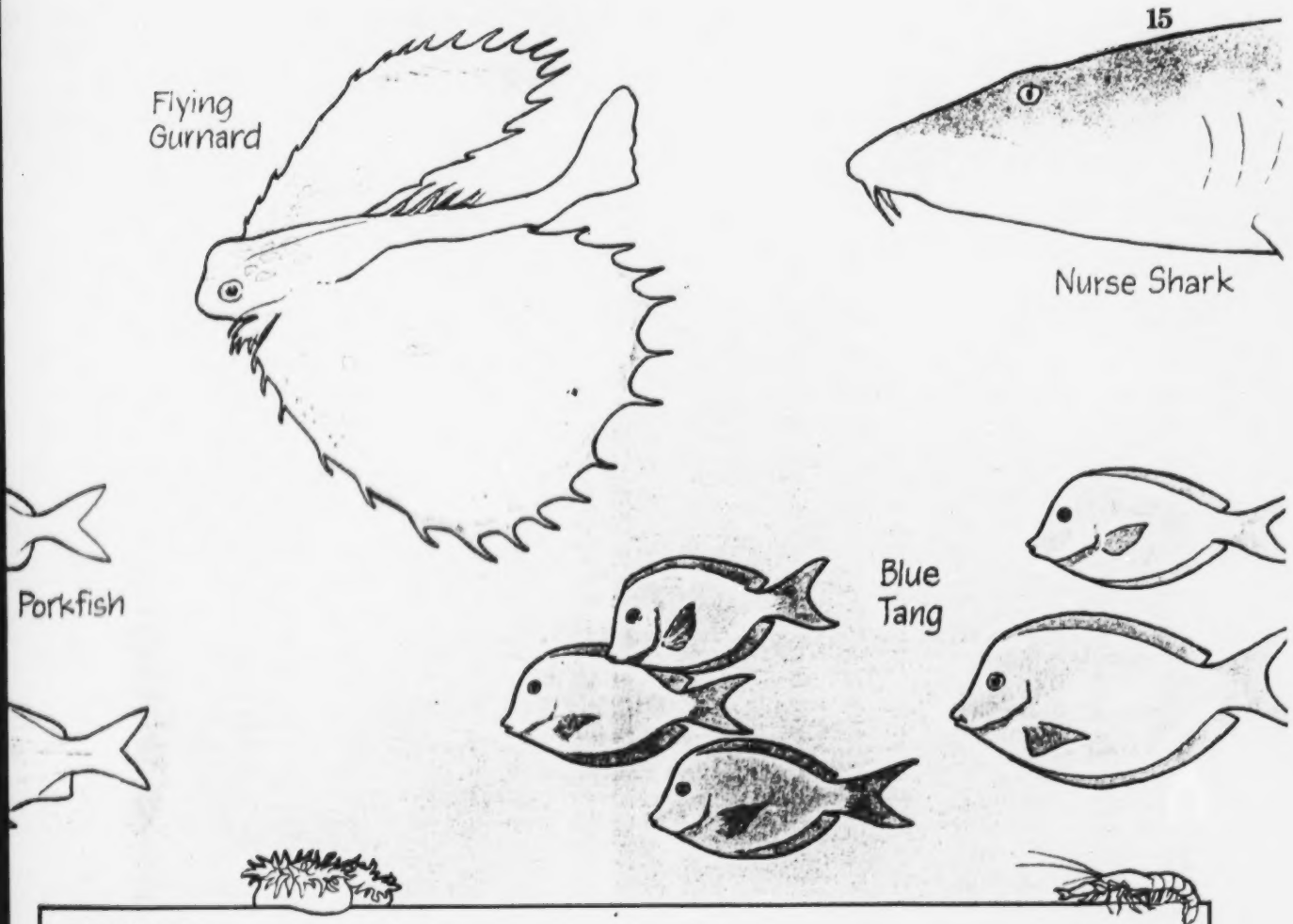
There are many different kinds of fish in the world. There are fresh water fish and salt water fish. There are big fish and small ones. There are darkly colored fish and brightly colored ones. There are fish that live near the water's surface and fish that live deep down near the bottom.

Most fish in the world need pure, unpolluted *water* to live in. When the water they live in becomes *polluted*, most fish get sick and can die. Eating fish that live in polluted water can make people sick too.

There are many ways people can protect fish. They can keep the water where fish live clean. They can make sure not to catch all the fish so that some are left to lay eggs and then new fish will be born.

I can help keep fish healthy by not dumping garbage into streams, lakes, rivers and oceans.





FOREST.

When *trees* grow together over a large area they make a forest. The trees in forests help keep the air we breathe fresh and moist. Forests are the homes, or *habitats*, of thousands of different kinds of *insects*, *wild animals* and *birds*.

Forests that have never been cut down are called ancient forests. We must be sure to save some ancient forests so that we can learn how *nature* grows a forest. We can also learn more about what the world was like hundreds of years before we were born.

I can save forests by not wasting paper and by recycling the paper I use.

G is for...

GARBAGE.

Garbage really isn't garbage at all! Almost everything people throw away can be *recycled* and used again.

- Food scraps can be put into a *compost* pile to make food for our gardens.
- Plastic, glass and metal can be recycled, melted down and made into new things.
- Paper can be made into recycled paper.
- Clothing can be given to people who need clothes.

I can recycle so that I make less garbage.

GARDEN.

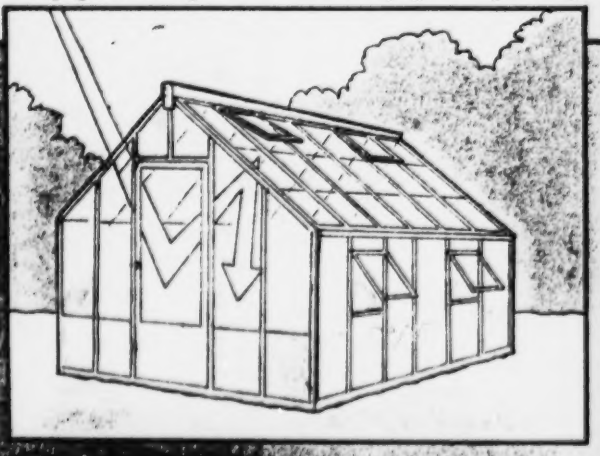
Gardens are places where people grow *vegetables* and flowers. Many people grow gardens on farms, in backyards and in greenhouses. You can make a garden almost anywhere. You can grow a small garden in a window box, on a roof top or even in a pot!

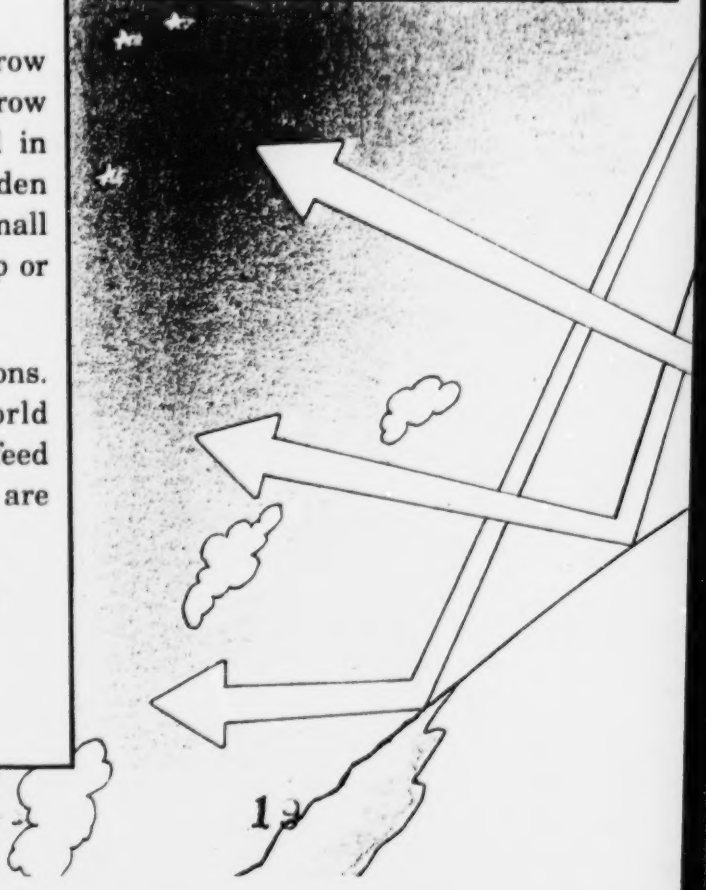
Gardens are important for many reasons. Flower gardens help make the world beautiful and vegetable gardens help feed people. Gardens take a bit of work, are interesting and can be a lot of fun.

I can start and take care of a vegetable or flower garden.

GREENHOUSE EFFECT.

People grow some plants all year long in greenhouses. A greenhouse is a special house with lots of glass, or clear plastic, to capture light and heat from the sun. The glass lets the sunlight *energy* in and keeps the heat from getting out. The trapped heat makes it warmer inside the greenhouse than it is outside. This extra warmth is very good for plants and they grow quickly.





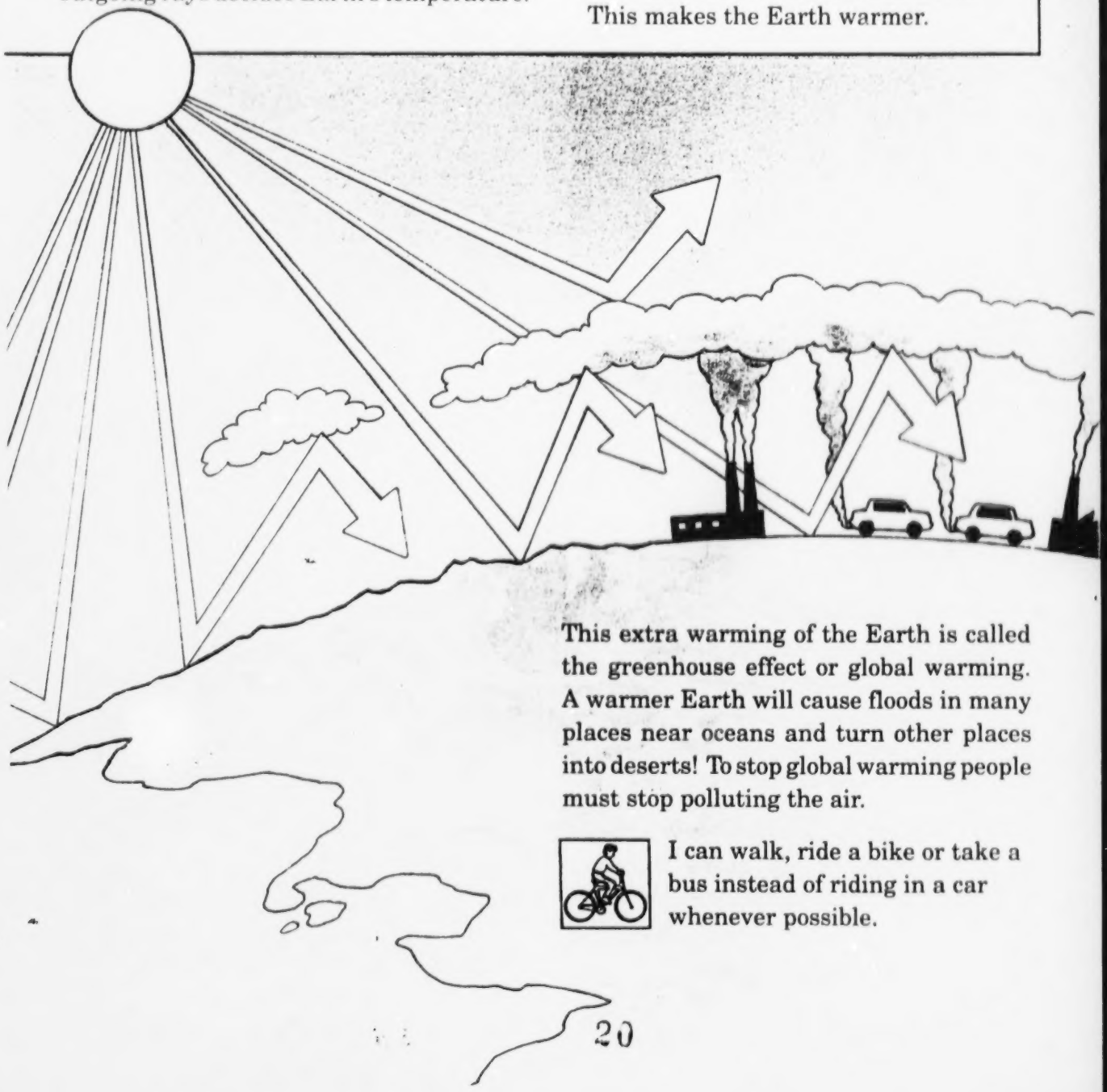
Earth is like a very big greenhouse. This is how it works:

- The sun's rays shine down on Earth. Most of the sun's rays bounce off Earth and go back into outer space.
- Some of the rays hit clouds and bounce back to Earth again.

The balance between incoming rays and outgoing rays decides Earth's temperature. This keeps the average temperature on Earth just right, not too hot or too cold.

When too many fumes from cars and smoke from factories *pollute* the air, this is what happens:

- More of the sun's rays stay on Earth because they hit the layer of air pollution and bounce back to Earth. This makes the Earth warmer.



This extra warming of the Earth is called the greenhouse effect or global warming. A warmer Earth will cause floods in many places near oceans and turn other places into deserts! To stop global warming people must stop polluting the air.

I can walk, ride a bike or take a bus instead of riding in a car whenever possible.

H is for...

HABITAT.

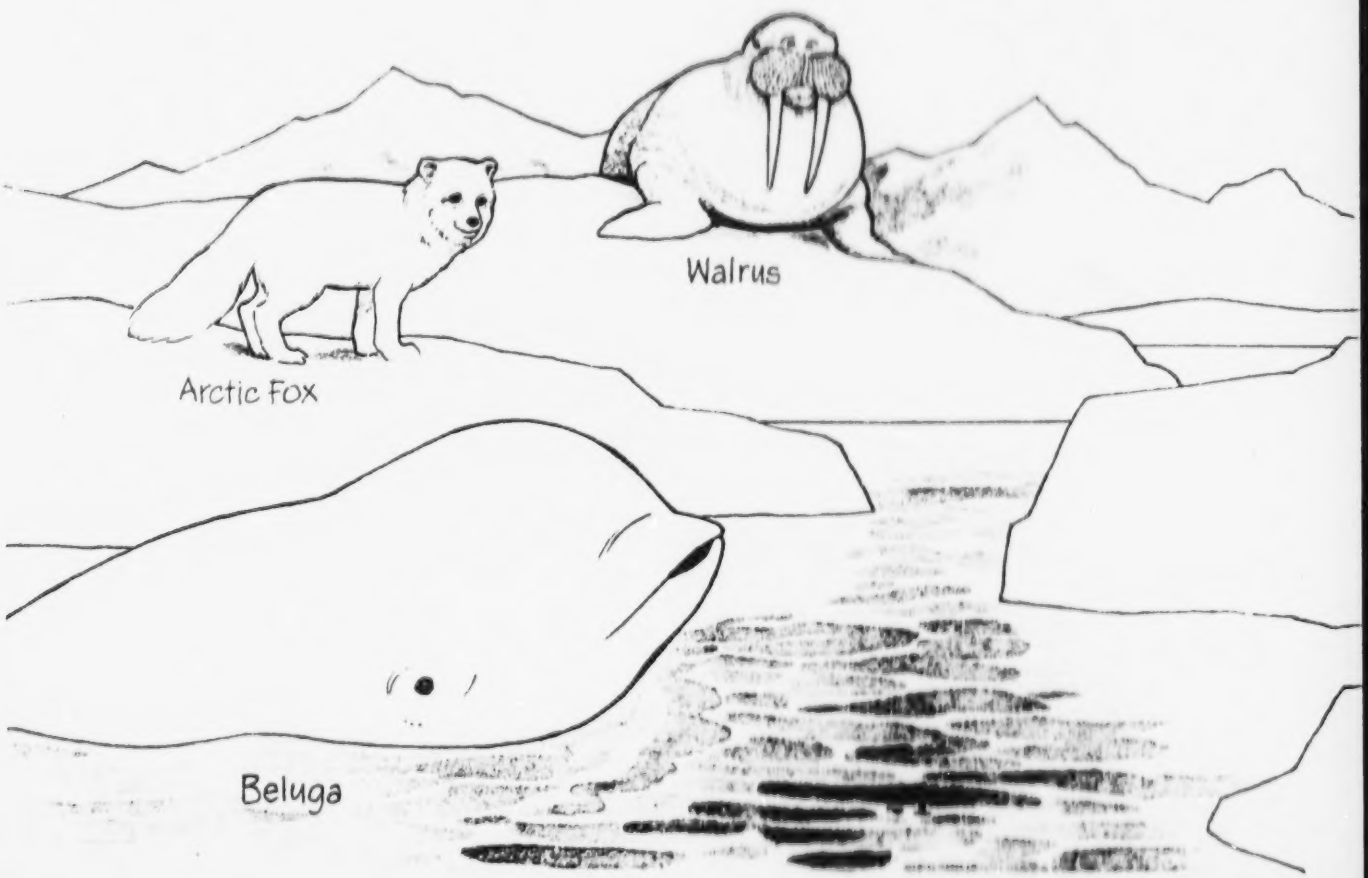
An *animal's* habitat is its home. It is the place where that animal lives, eats and raises its young. A *whale's* habitat is the *ocean* where it swims and eats. A polar bear's habitat is in the icy Arctic. Plants have habitats too. A plant's habitat is where it grows and where its seeds fall and grow to make new plants.

If an animal or plant's habitat is damaged or destroyed that animal or plant could die. If all the habitats of a kind of animal or plant are destroyed, that animal or plant will become *extinct*.

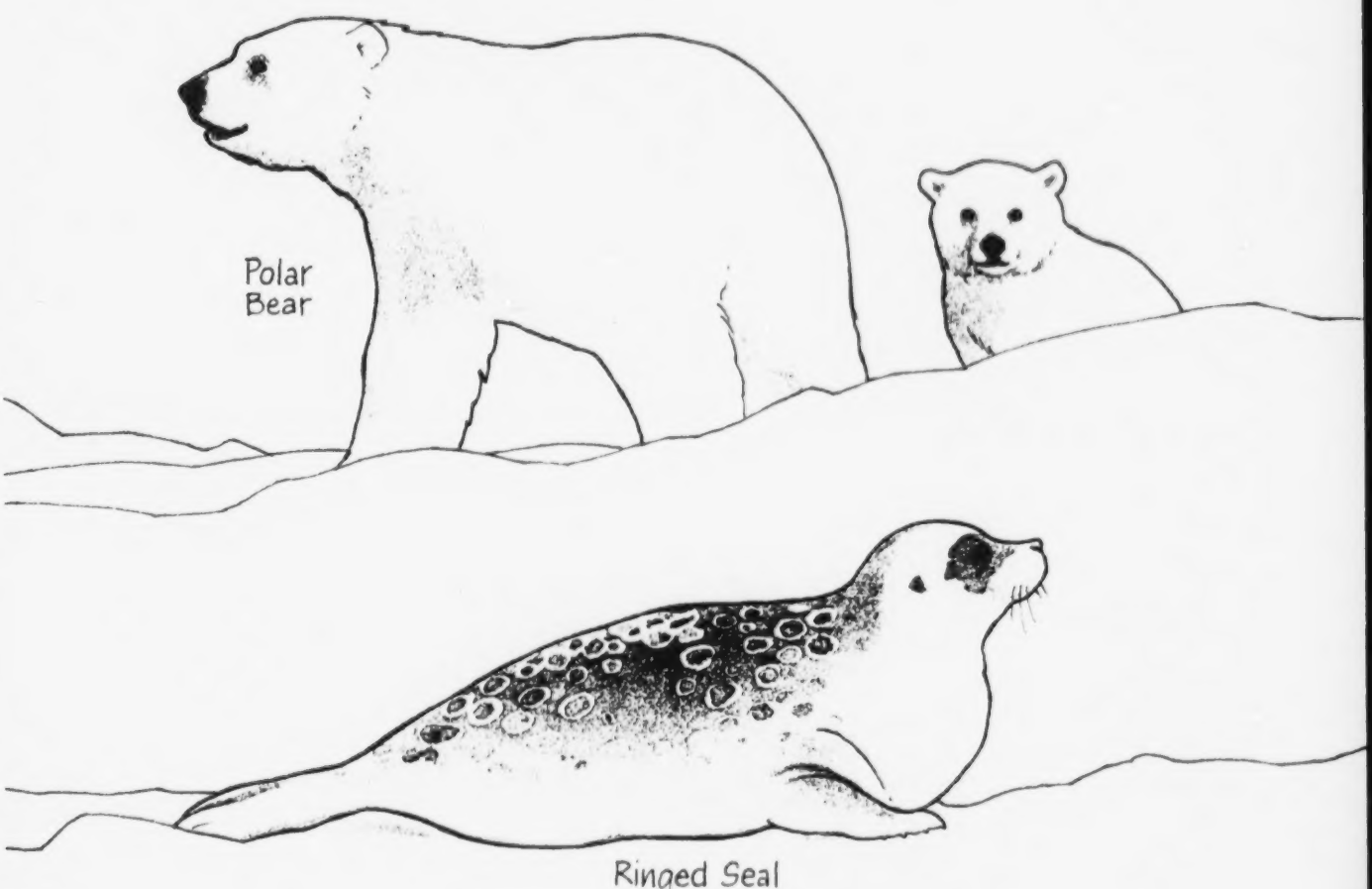
I can learn more about plant and animal habitats.

I can be very careful not to disturb animal and plant habitats.

I can take care of my own habitat by not polluting it.



Snowy
Owl
Rock
Ptarmigan


Polar
Bear
Ringed Seal

Mosquito

I is for...

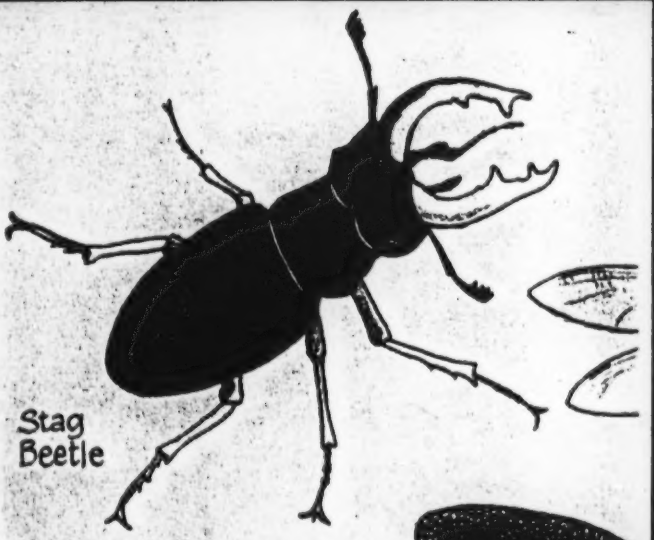
INSECTS.

Insects are small *animals* that have three parts to their body and six legs. Insects have a hard skeleton on the outside of their bodies. Ants, bees, beetles and butterflies, moths and mosquitoes are insects.

There are more different kinds of insects on Earth than all the other kinds of animals put together. No wonder you see insects everywhere! Insects are important because they help *nature* recycle things.

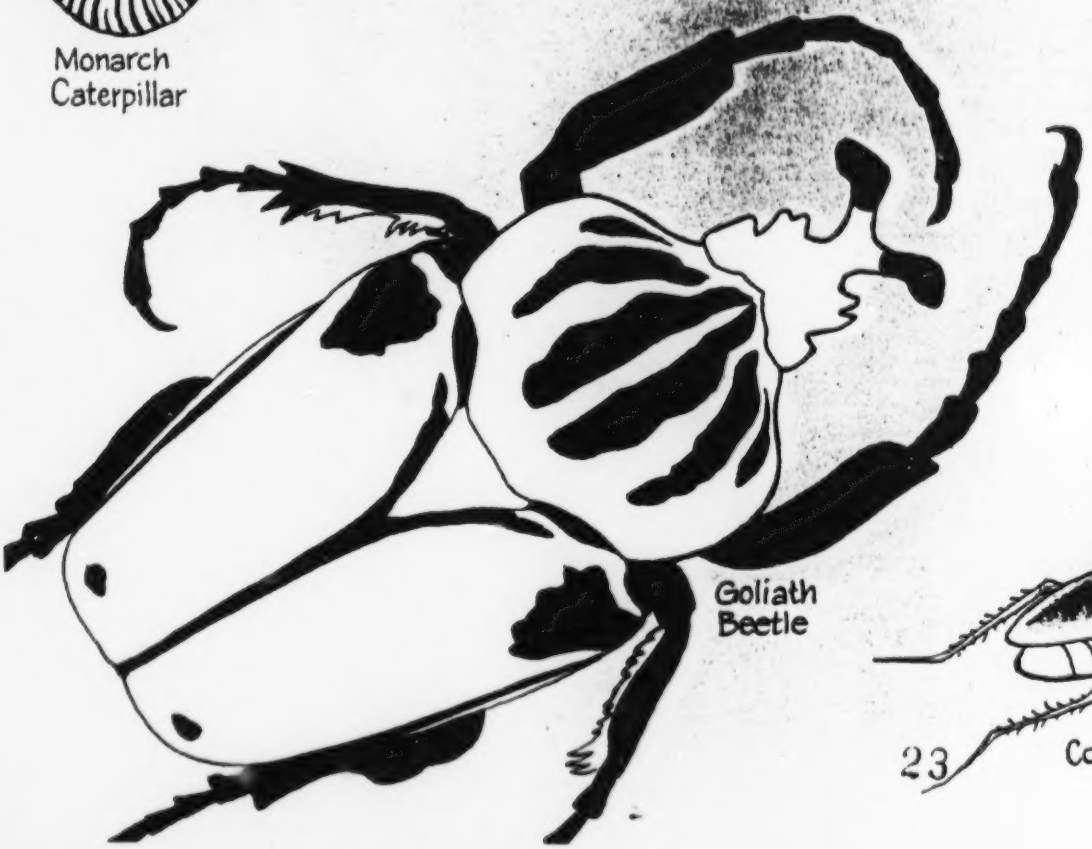
I can respect all living things and not thoughtlessly kill insects.

Monarch Caterpillar



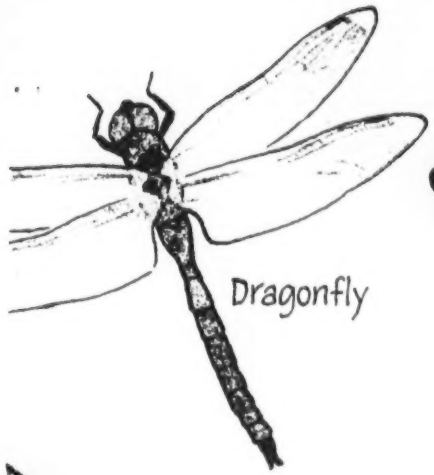
Stag Beetle

Civil Bluet



Goliath Beetle

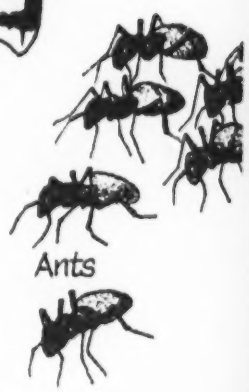
Cockroach



Dragonfly

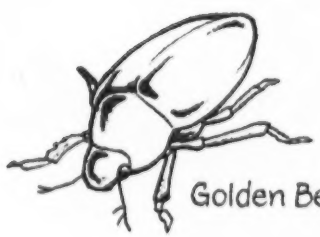
Madagascan
Sunset Moth

Glass
Swallowtail



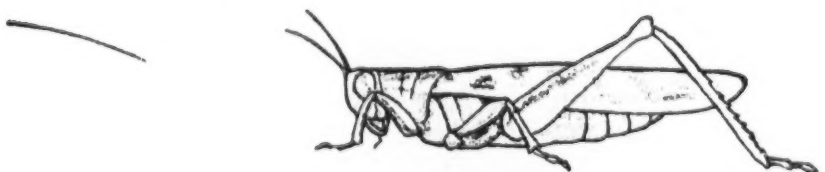
Ants

Weevil



Golden Beetle

Bumblebee



Grasshopper

Ladybug

Here are some things I can do:

Home:

I can conserve water by turning it off when I am not using it.

I can conserve electricity by turning off the lights, TV's and radios when I don't need them.

I can conserve metals by recycling cans.

I can recycle almost all of my garbage.

I can compost things that are biodegradable, like kitchen scraps, leaves and cut grass.

I can recycle things that are not biodegradable like plastic, glass and metal.

I can recycle paper so fewer trees need to be cut down.

I can recycle the clothing and toys I no longer use.

I can keep doors and windows closed when it is cold out.

I can turn down the thermostat on the furnace.

I can put on more clothes instead of turning up the heat.

I can talk with my parents and friends about ecology.

School:

I can learn more about the Amazon Rainforest.

I can learn more about deforestation around the world.

I can learn why insects are important to animals and plants.

I can learn why it is important to protect animal and plant habitats.

I can learn more about endangered plants and animals and I can help protect them.

I can learn about and appreciate people who are different than I am.

I can help organize a school clean-up project.

I can draw an eco poster or write a story about the environment.

Shopping:

I can be happy with less.

I can use just what I need and no more.

I can decide never to buy furs or feathers from endangered animals.

I can decide never to buy things made from turtle shells.

I can decide never to buy anything made of ivory including jewelry and carvings.

I can buy a live Christmas tree and plant it after Christmas.

I can buy rechargeable instead of disposable batteries.

Outside:

I can protect wild animals by not disturbing their natural homes.

I can protect birds by not disturbing their nests.

I can make a bird feeder, a birdhouse or a birdbath.

I can respect all living things and not thoughtlessly kill insects.

I can conserve gas by walking, riding a bike or using mass transit whenever possible.

I can plant a fruit or nut tree.

I can start and take care of a vegetable or flower garden.

I can take care of my own habitat by not polluting it.

I can stop being a litterbug if I am one.

I can be careful not to throw garbage into streams, lakes, rivers and oceans.

I can be careful not to dump oil into the water when I am on a boat.

I can help save wilderness areas and parks.

AND

I can remember how special Earth is and do all I can to protect it.

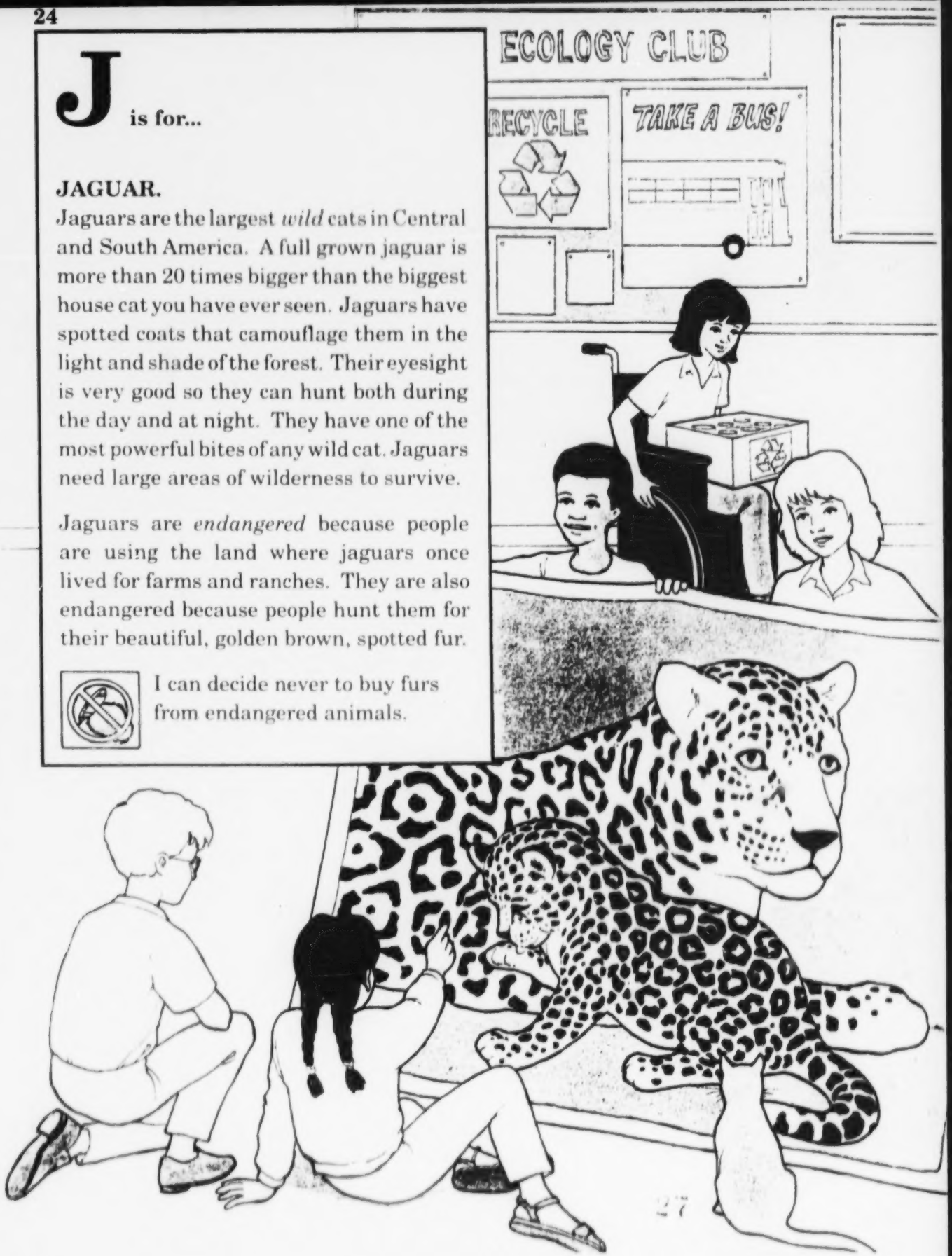
J is for...

JAGUAR.

Jaguars are the largest *wild* cats in Central and South America. A full grown jaguar is more than 20 times bigger than the biggest house cat you have ever seen. Jaguars have spotted coats that camouflage them in the light and shade of the forest. Their eyesight is very good so they can hunt both during the day and at night. They have one of the most powerful bites of any wild cat. Jaguars need large areas of wilderness to survive.

Jaguars are *endangered* because people are using the land where jaguars once lived for farms and ranches. They are also endangered because people hunt them for their beautiful, golden brown, spotted fur.

I can decide never to buy furs from endangered animals.



K is for...

KIDS.

Kids can help save the *planet*! Here are some things they can do:

• Conserve: Kids can save *energy* by turning off lights and *water* when they don't need them. They can save gas and *oil* by walking, riding a bike or taking a bus instead of riding in a car. They can *recycle* things they no longer need. They can ask themselves if they really need more toys.

• Learn: Kids can learn about the earth, sky, water, plants and animals and how to protect and care for them. They can share what they know with other kids and with adults.

• Help: Kids can join an *ecology* action club. They can do projects that will help our planet. When kids work together they can accomplish a lot. It's the little things people do every day that can make a big difference to the world.

• Remember: A very important way kids like you can help save the planet is to remember what you are learning now about the *environment* and grow up to be responsible adults who will protect and care for Earth!

L is for...

LANDFILL.

In most towns and cities if people do not *recycle* a big truck picks up their garbage and dumps it in a place called a landfill.

Many landfills are causing problems. Some of the *garbage* that is dumped into them has poisonous chemicals in it. These poisons are not good for the ground or the water under the ground. They can sometimes leak through the ground into the *water* that people and animals drink.

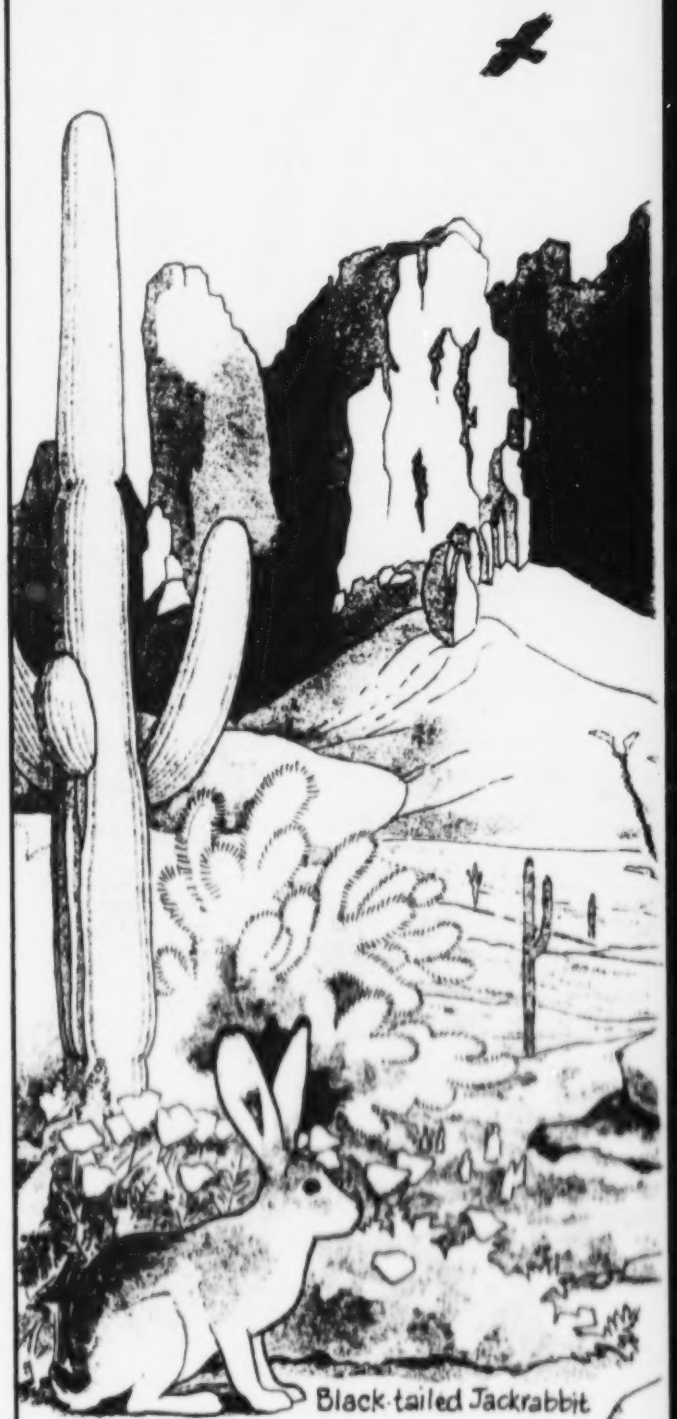
Many landfills are getting full. If people don't recycle we will always need new landfills, and land that could be used for houses or for growing food is wasted.

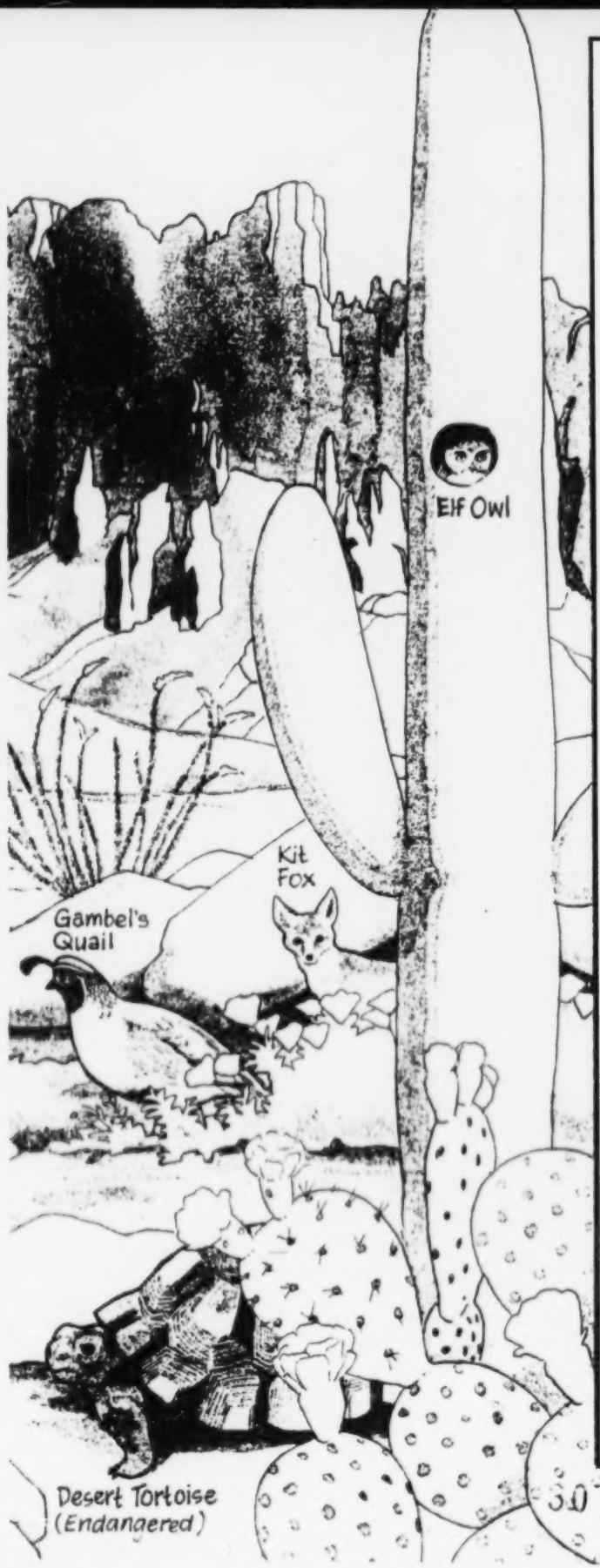
If we used less and recycled more we would make much less garbage and we wouldn't need so many landfills.

I can make compost from my kitchen and garden wastes.

I can recycle paper, plastic, glass and metal.

I can recycle the clothing and toys I no longer use.





LITTERBUG.

If you throw or leave trash about, you are a litterbug. Litterbugs throw gum and candy bar wrappers in school halls. They leave *garbage* on beaches, in parks and sometimes they even throw trash out of cars!

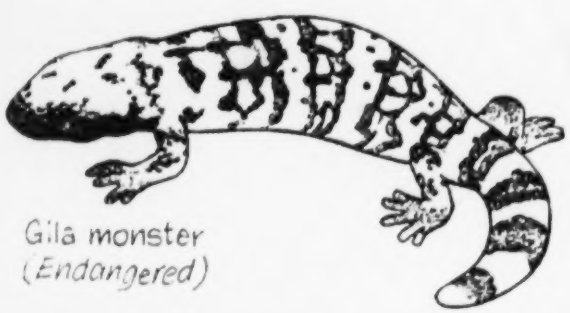
To keep our homes, schools, cities, towns, neighborhoods, highways, roads, paths, sidewalks, streets, lanes, parks, beaches, lakes, rivers, streams, *oceans* and wilderness areas beautiful...don't be a litterbug!

I can stop being a litterbug if I am one.

LIZARDS.

Lizards are four footed, five toed *animals* with tough, scaly bodies. Lizards usually live in warm, sunny places and their scales protect them from the sun so they do not dry out. There are many kinds of lizards. Some are only 2 inches (5cm) long and some are 10 feet (3m) long! Most lizards walk on the ground, but some climb trees and others glide in the air!

Many lizards are *endangered* because their habitats are being destroyed.



M is for...

MAMMALS.
Mammals are *animals* with fur and hair. Their young are born alive not hatched from eggs. All mother mammals feed their babies milk. Whales are mammals, bats are mammals and mice are mammals. You are a mammal too!

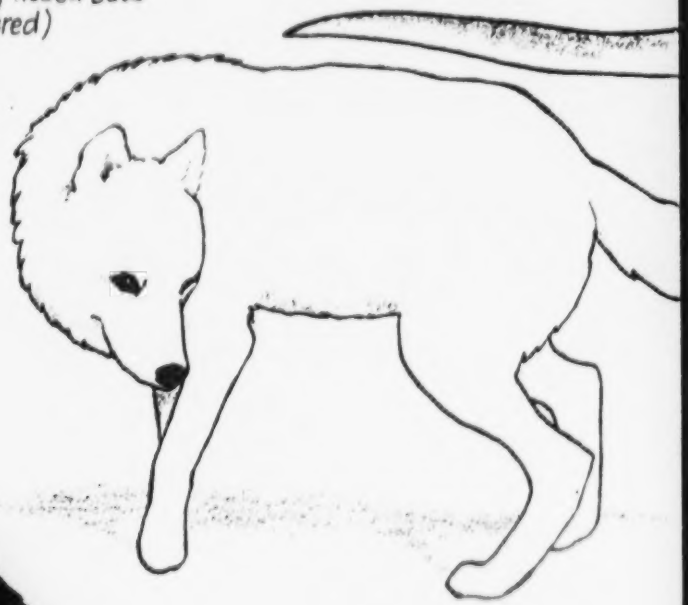
MASS TRANSIT.
Mass transit is a way to move a lot of people at one time. When people travel in buses, trains and subways they save *energy*. When people travel together in one big vehicle instead of separately in many cars there is much less *pollution*. It takes less gas to move one big vehicle with lots of people in it than it does to move many smaller vehicles with one or two people in each one.

I can use mass transit instead of being driven in a car.

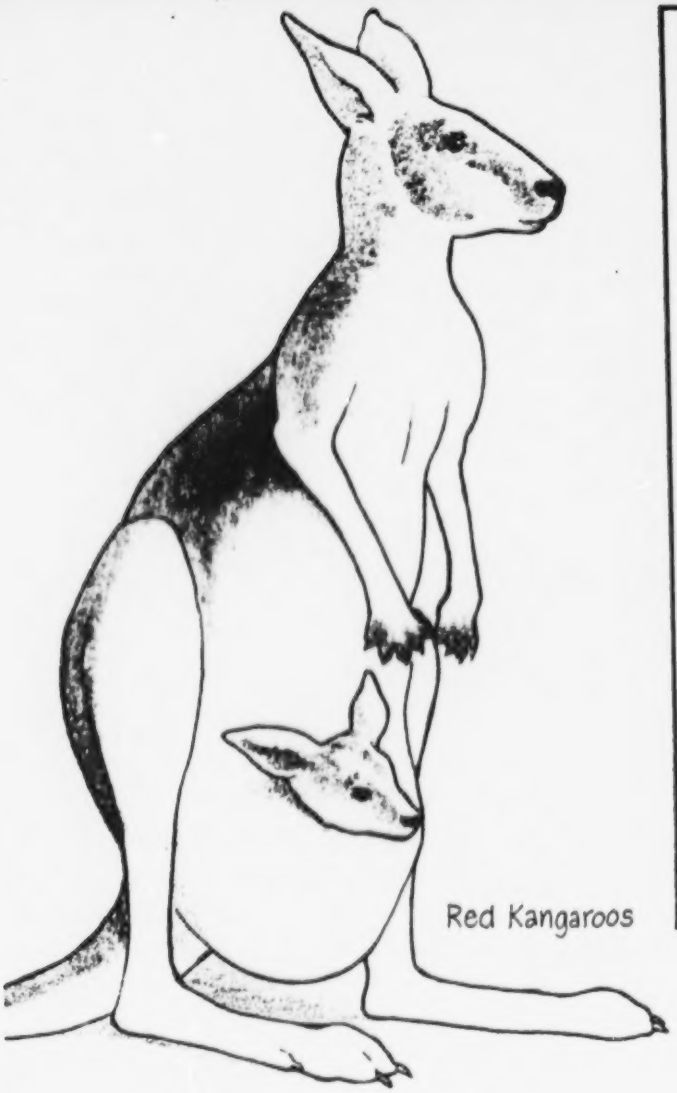
MICE.
Mice are small furry *mammals*. There are many different kinds of mice and most of them live outside. Mice are food for cats, owls, foxes and many other *animals*. Without mice these animals would have less to eat. Mice also clean up the *environment* by eating crumbs and seeds. All animals including every *bird*, *insect* and *fish* have a place in the world and a reason for being alive...even mice.

I can learn more about animals, insects and plants.

Kitti's Hog-nosed Bats
(Endangered)



Mountain Gorillas
(Endangered)



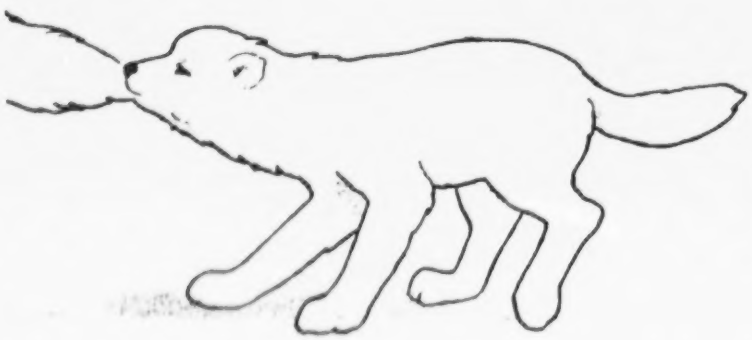
Red Kangaroos

N is for...

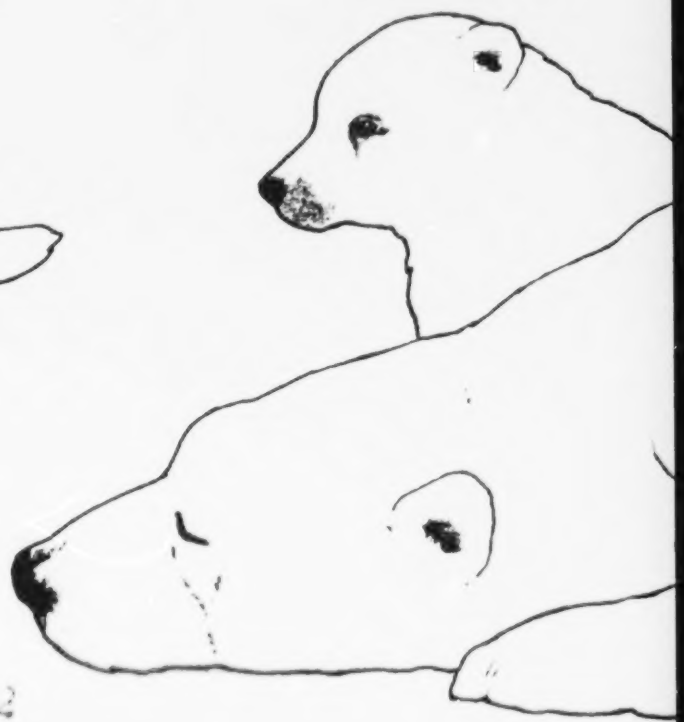
NATURE.

Everything in the world from the smallest *insect* to the largest *animal* is part of nature. Streams, deserts, oceans, grasslands, *trees*, *forests* and even the tiniest plants are all part of nature. In nature nothing is extra and nothing is wasted. *People* are part of nature. We must all do our best to preserve and protect our special *planet* Earth.

Polar Bears



Arctic Wolves



O is for...

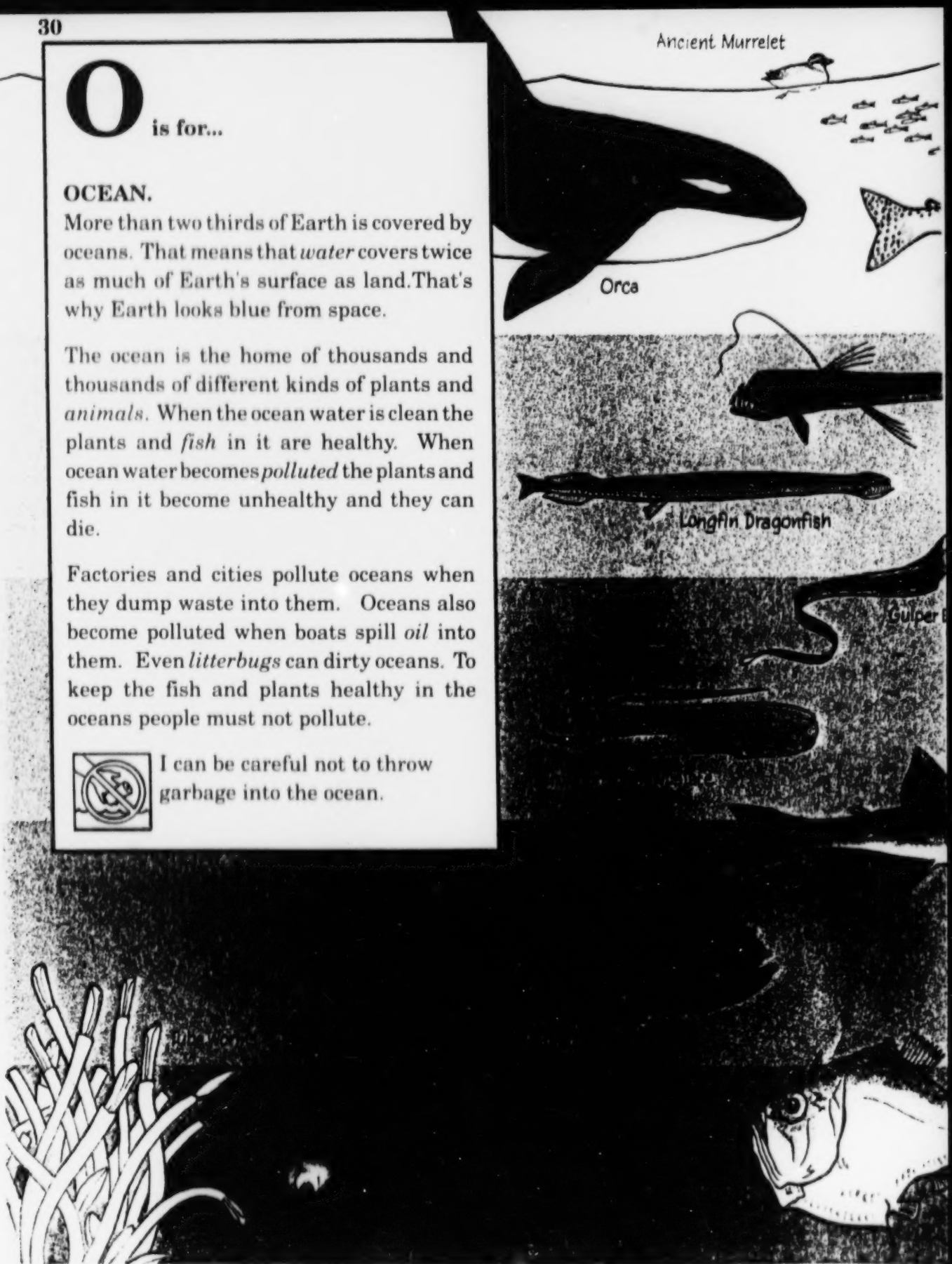
OCEAN.

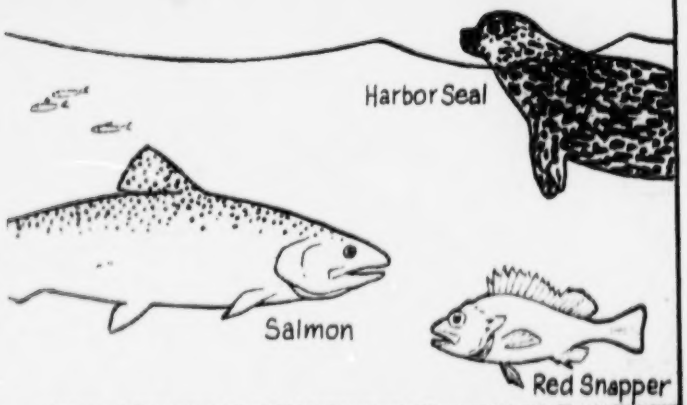
More than two thirds of Earth is covered by oceans. That means that *water* covers twice as much of Earth's surface as land. That's why Earth looks blue from space.

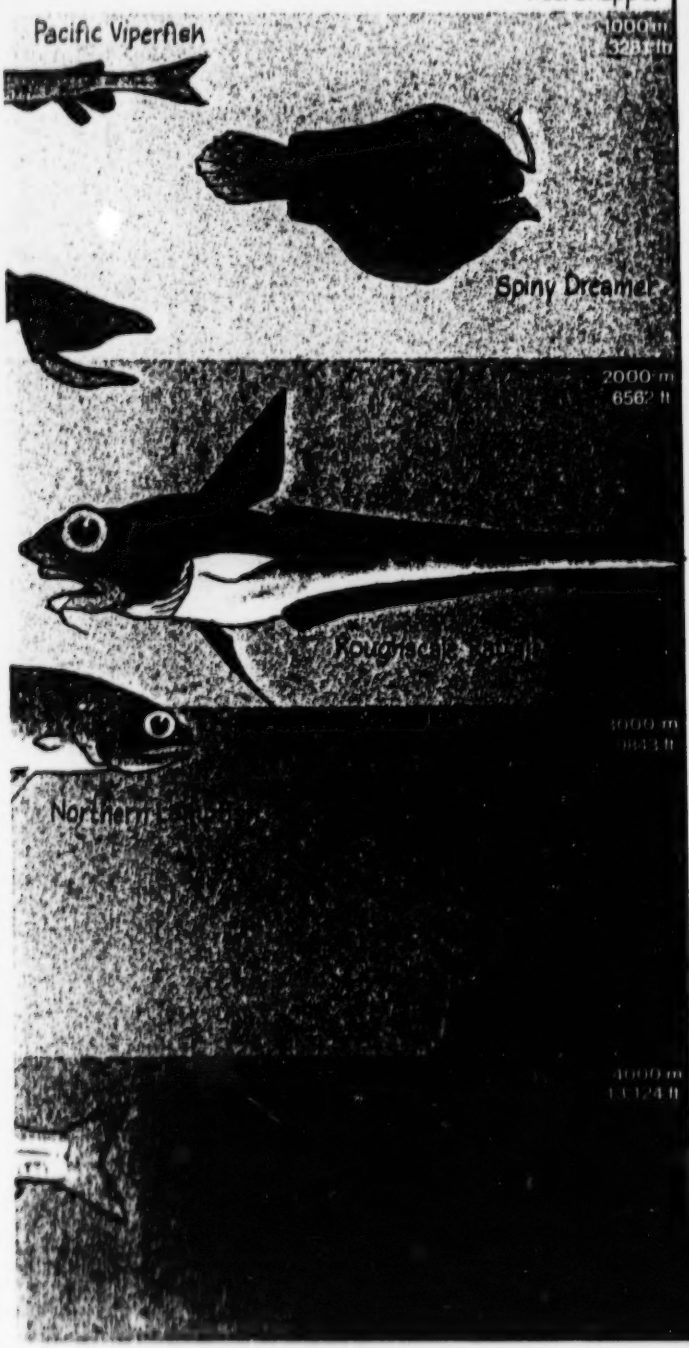
The ocean is the home of thousands and thousands of different kinds of plants and *animals*. When the ocean water is clean the plants and *fish* in it are healthy. When ocean water becomes *polluted* the plants and fish in it become unhealthy and they can die.

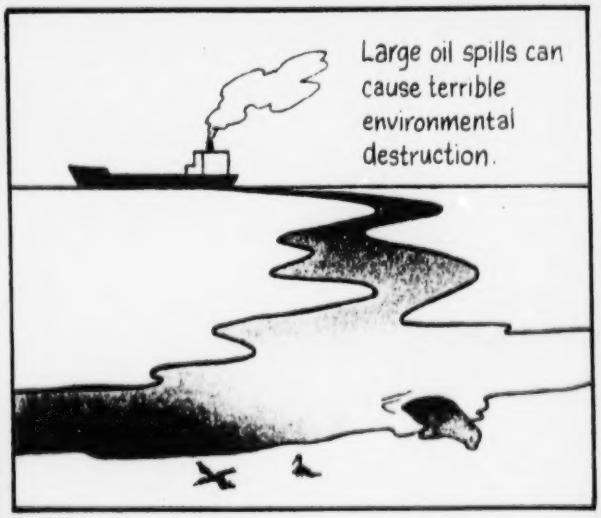
Factories and cities pollute oceans when they dump waste into them. Oceans also become polluted when boats spill *oil* into them. Even *litterbugs* can dirty oceans. To keep the fish and plants healthy in the oceans people must not pollute.

I can be careful not to throw garbage into the ocean.









OIL.

Oil is a black, sticky liquid that is found buried under the earth. Factories change oil into gas to run cars. They change oil into fuel oil to run factories and heat homes.

Big boats, called tankers, carry oil from where it is pumped out of the earth to factories that make it into gas and fuel oil. When one of these tankers hits a rock or has an accident, oil leaks out of it and becomes an oil spill.

An oil spill can cause *fish* and plants to die. When sticky oil washes to shore it can get on shore *birds* and other *animals*. Large oil spills can be harmful to plants, animals, fish and birds for many years. We must be very careful to prevent oil spills.

If people use less oil there will be fewer oil spills. If people use less oil there will be less air *pollution* and the *greenhouse effect* will be lessened.

I can be careful not to dump oil into the ocean when I am on a boat.

P is for...

PEOPLE.

People speak different languages and live in different countries. They eat different foods and wear different clothes. Some people live in cities and some in the country. Some live in the mountains and some live on the plains. Some live on boats and some in the jungle. Even though people are different all people need fresh air to breathe, clean *water* to drink, healthy food to eat and a safe place to live.

Today there are almost six billion people living on Earth - that's 6,000,000,000 people! If all six billion people stood in a line they would circle the Earth 100 times. There are 250,000 more people on Earth every day, that's three new people every second! We must all protect this special *planet* so that there will be enough air, water and land for all living things.

I can learn about and appreciate people who are different than I am.

PLANET.

A planet is a huge, gigantic chunk of rock or frozen gases. Nine planets travel around the sun. These planets, with the sun at the center, make our solar system.

Mercury, the closest planet to the sun, is much too hot for plants and animals to live on. Venus, the second planet from the sun, is also too hot and is covered by poisonous gases. Mars, the fourth planet, has very little *water* and air and it is too cold for plants and animals to survive. All the others are so far away from the sun that their *atmospheres* are frozen solid!

Earth, the third planet from the sun, is the only planet that has a *biosphere*. It is the only planet that has just the right temperature and just the right conditions for animals and plants to live in. The planet Earth is a very special planet. We must protect it because...

...Good planets are very hard to find!

I can remember how special Earth is and do all I can to protect it.

POLLUTION.

Pollution happens when unwanted and harmful things get into something that is pure and clean. Pollution is bad for most living things.

Air is polluted by smoke from factories and fumes from cars. We will have less air pollution if we use fewer cars, smaller cars and more *mass transit*.

Water is polluted by waste from factories, waste from sewers, *oil* spills and wastes seeping out of *landfills*. We will have less water pollution if towns, cities and factories don't dump waste into water and if boats don't spill oil into it.

Land is polluted by *garbage* and waste. We will have less land pollution if we *recycle*.

Once something is polluted it is very hard to clean it up. The best way to get rid of pollution is to stop it from happening in the first place. To keep our planet healthy we must reduce pollution now!

I can help with school clean-up projects.

I can recycle.

Q is for...

QUESTIONS.
Here are some questions I can ask myself:

- Do I turn off lights when I don't need them?
- Am I a *litterbug*?
- When my clothes get too small do I give them to someone who is smaller who can use them?
- Do I give the toys I no longer want to other children?
- Do I really need all the toys I want?
- Do I *recycle* everything I can?
- Do I walk, ride a bike or take a bus instead of riding in a car when I can?
- Am I learning more about *pollution* and *conservation*?
- Am I teaching others what I already know about the *environment*?
- Do I care about and respect other living things?
- Am I kind to all *animals*?
- Am I doing something every day to help the *planet*?

R is for...

RAIN.
Rain returns the *water* that the sun has evaporated into clouds back to Earth. Rain waters plants. Rain fills streams and lakes so *fish* can live in them. Rain gives us fresh water to drink. All land *animals* and plants need rain.

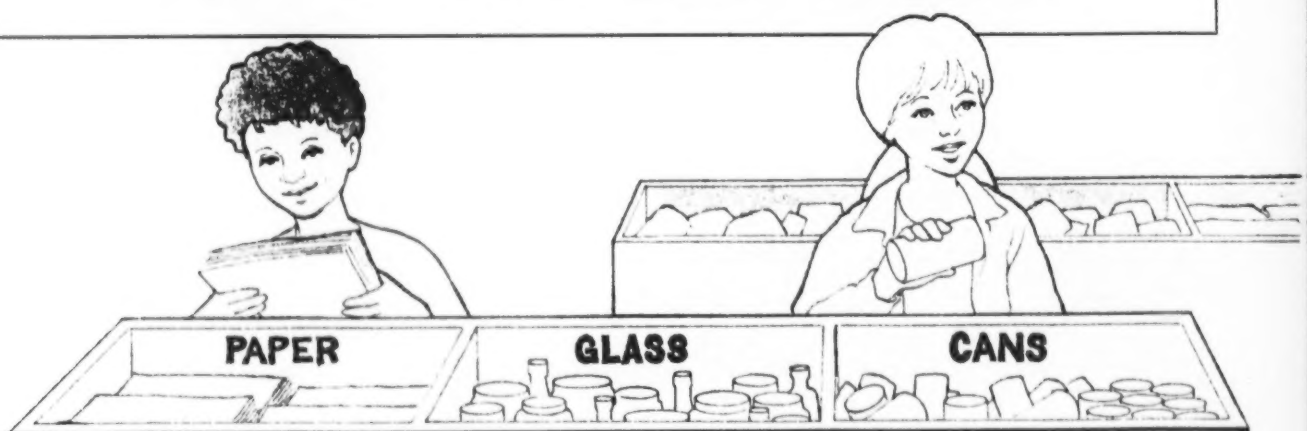
When less rain than usual falls in an area there is a drought. During a drought plants and animals can suffer because they do not have enough water. If there is too much rain, rivers flood and plants and animals can die.

Some of the fumes that *pollute* the air make rain that harms plants and animals. This rain is called acid rain. This is how acid rain is made:

- Fumes from cars and smoke from factories pollute the air.
- These fumes and smoke mix with the water in clouds and make it acid.
- The rain that falls from these clouds is acid rain.

Acid rain is harmful to all living things and can cause *trees*, plants and *fish* to die. When people stop polluting the air there won't be any harmful acid rain.

SCHOOL RECYCLING CENTER



RECYCLE.

Recycling means to use again. People can recycle things instead of throwing them into the *garbage*. They can do this by separating things and putting them into the right recycling bins. When people recycle they are conserving *resources* and saving *energy*.

Here are five kinds of things that you can recycle:

- paper
- kitchen scraps, leaves and cut grass
- glass
- plastic
- metal

RESOURCES.

A resource is anything that is found in *nature* and can be used by people. Air, coal, *fish*, metals, natural gas, oil, soil, sunlight, *trees*, *water* and wind are all resources. All resources must be *conserved*, used wisely and saved for the future or we will run out of some of them.

S is for...

SHARING.

You share the Earth with all living things. This includes wild plants and *animals* and nearly six billion other *people*! When you remember that every living thing has a reason for being on Earth, it becomes easier to share.

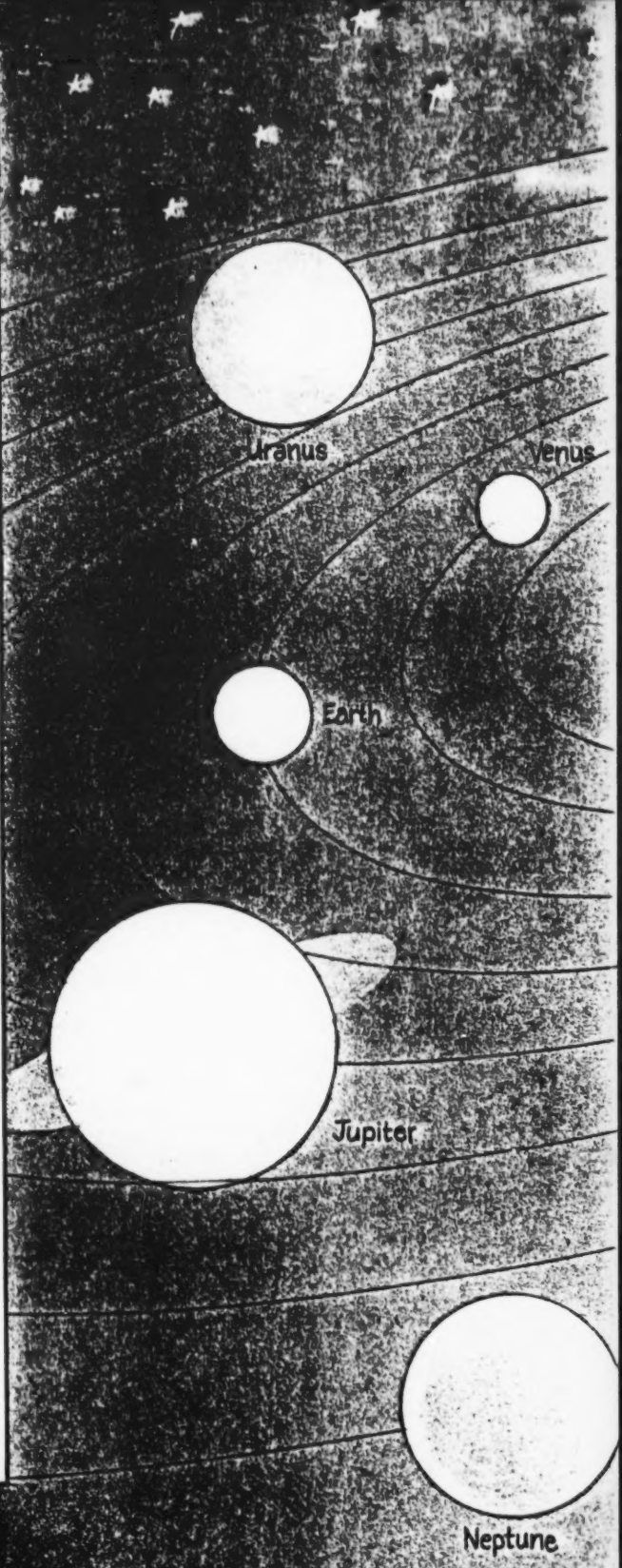
If people use only what they need and they *recycle* instead of throwing things away, there could be enough food, clothing and shelter for everyone now living on Earth. But, if people use more than they need and they don't recycle, there will not be enough for everyone. There will not be enough for the children who will be born next. There will not be enough for the rest of the plants and animals.

I can use just what I need and no more.

I can be happy with less.

I can protect animal habitats.

I can recycle.



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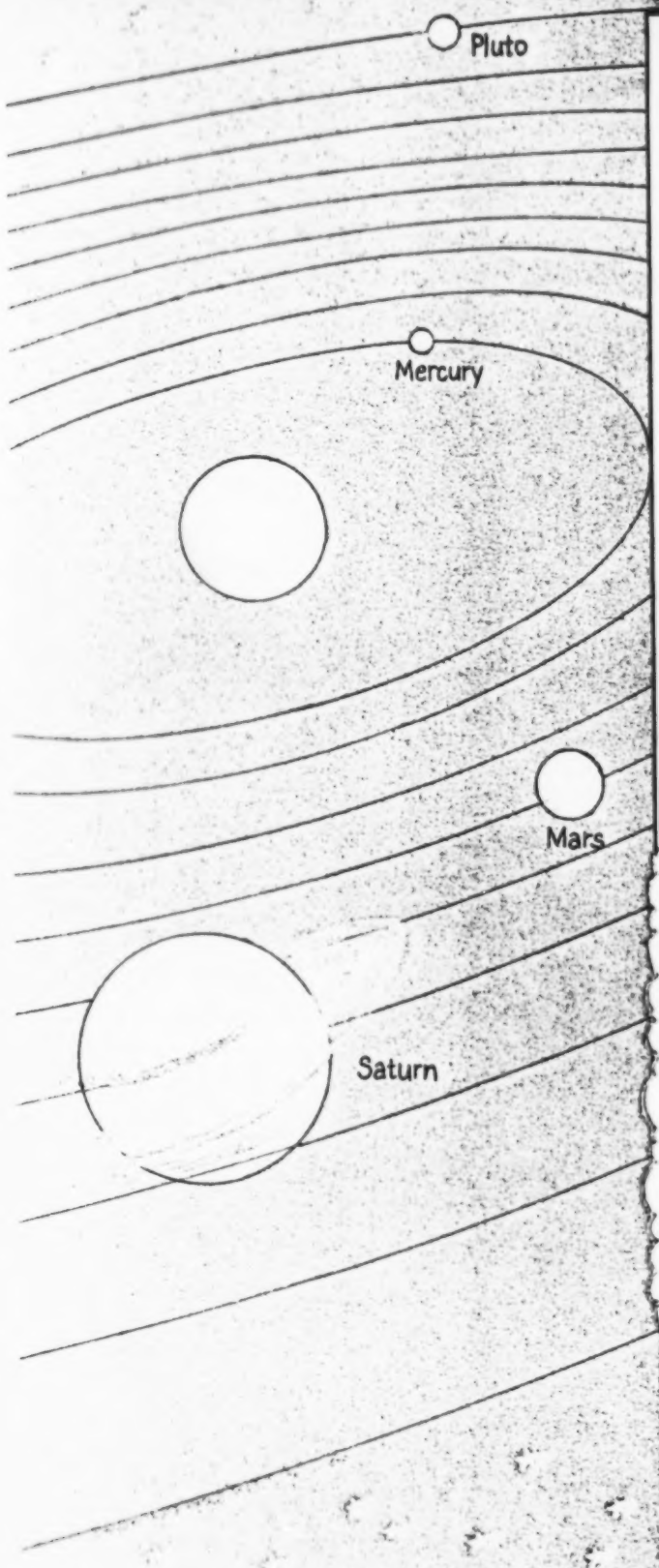
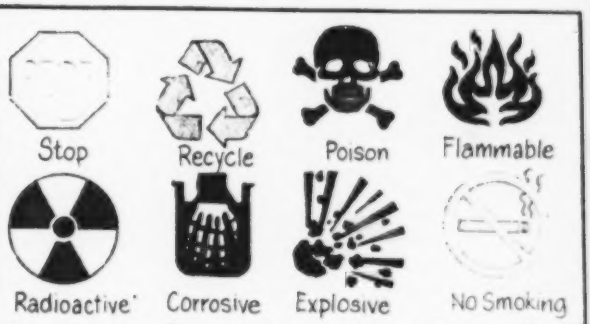


SIGNS.

Signs give quick messages. You know what to do when you see a stop sign. Stop signs help keep our roads and walkways safe. Other signs warn people about things that are harmful to them and to the *environment*. Learn what these signs mean. When you see them pay attention to their warnings. Whenever you can, avoid using products with warning signs that tell you the product is dangerous. Here are some common signs to look for:



SMOG.

Smog is a word made from combining the words smoke and fog. Smog comes from the fumes from cars and the smoke from factories. Smog hurts our lungs and sometimes makes our eyes sting. If people stop *polluting*, the air will become fresh and clean again and there will be no more smog.

I can walk, ride a bike or take a bus.

SUN.

The sun is the star at the center of the solar system. The sun's *energy* keeps the Earth warm and makes plants grow. The energy from it is called solar energy. The sun is a *pollution* free energy source.

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T is for...

TREES.

Trees are plants that grow tall and have thick stems called trunks. Trees give us fruit and nuts to eat, wood for houses and paper for books. Trees are the homes of many *birds* and *animals*. Billions of trees growing in *forests* keep the air on Earth fresh and moist. Trees are very important to all living things on Earth. If people cut trees down faster than *nature* can re-grow them our forests will soon be gone.

I can buy a live Christmas tree and plant it after Christmas.

I can plant a fruit or nut tree.

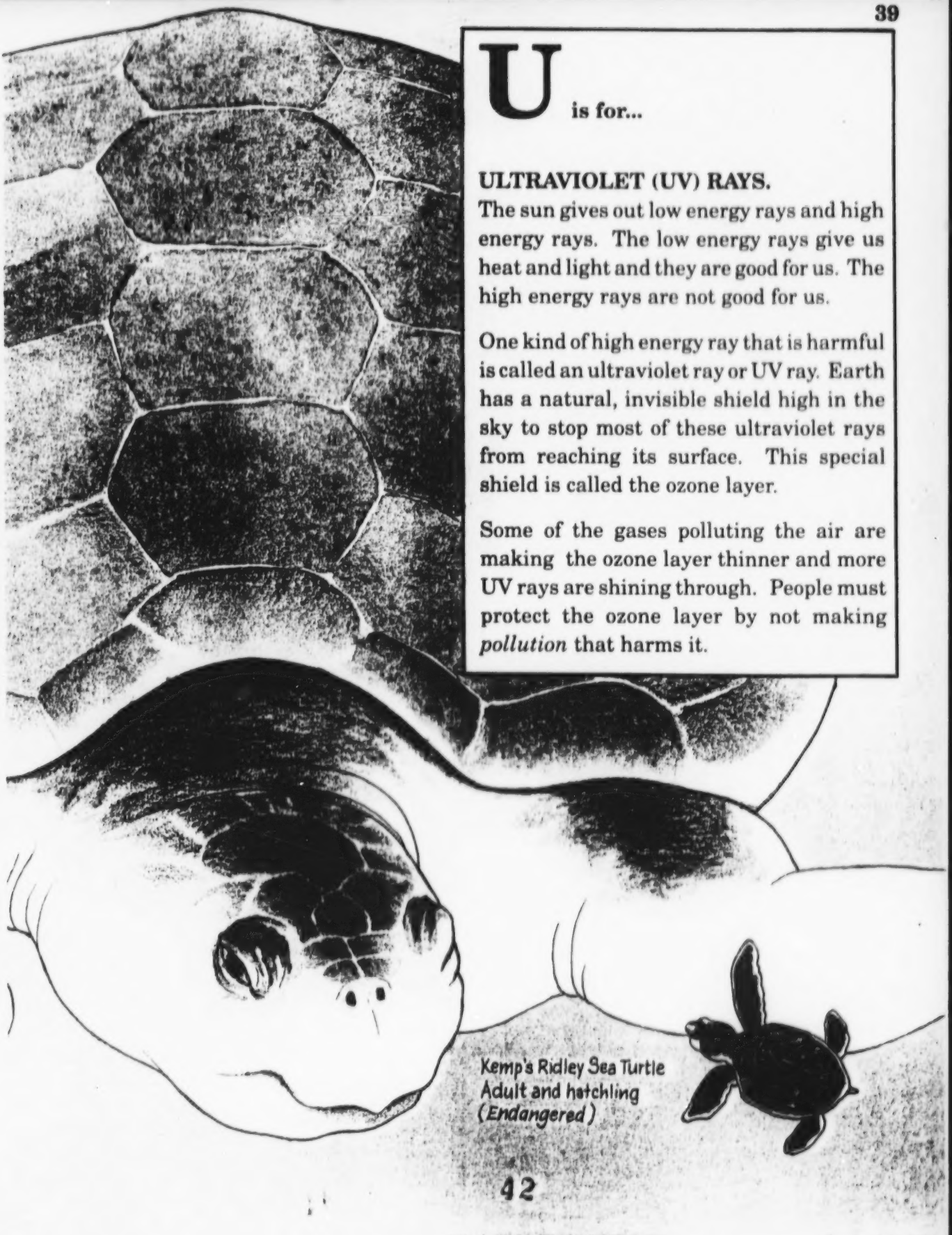
I can recycle paper so fewer trees need to be cut down.

TURTLES.

Turtles are *animals* with hard shells, beak-like mouths and no teeth. There are many different kinds of turtles. All turtles lay their eggs on land. Some turtles live on land and some live in *water*. Several kinds of turtles can live to be more than one hundred years old.

When a turtle's *habitat* is polluted, its eggs might not hatch properly and the baby turtles could die. *Pollution* is bad for all living things including turtles. Several kinds of sea turtles are *endangered* because people are killing too many of them for food and for their beautiful shells.

I can decide never to buy things made from turtle shells.



U is for...

ULTRAVIOLET (UV) RAYS.

The sun gives out low energy rays and high energy rays. The low energy rays give us heat and light and they are good for us. The high energy rays are not good for us.

One kind of high energy ray that is harmful is called an ultraviolet ray or UV ray. Earth has a natural, invisible shield high in the sky to stop most of these ultraviolet rays from reaching its surface. This special shield is called the ozone layer.

Some of the gases polluting the air are making the ozone layer thinner and more UV rays are shining through. People must protect the ozone layer by not making *pollution* that harms it.

Kemp's Ridley Sea Turtle
Adult and hatchling
(Endangered)

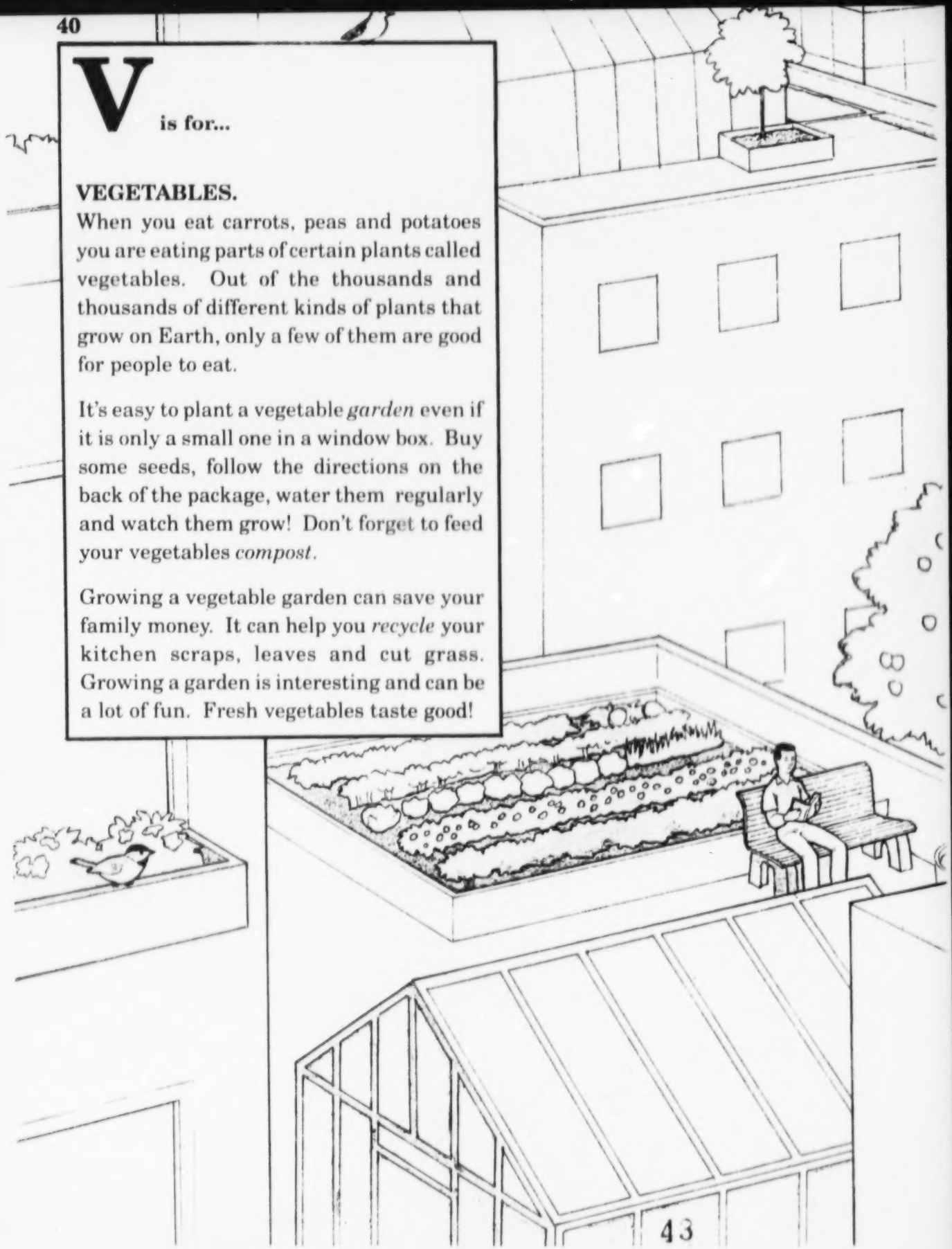
V is for...

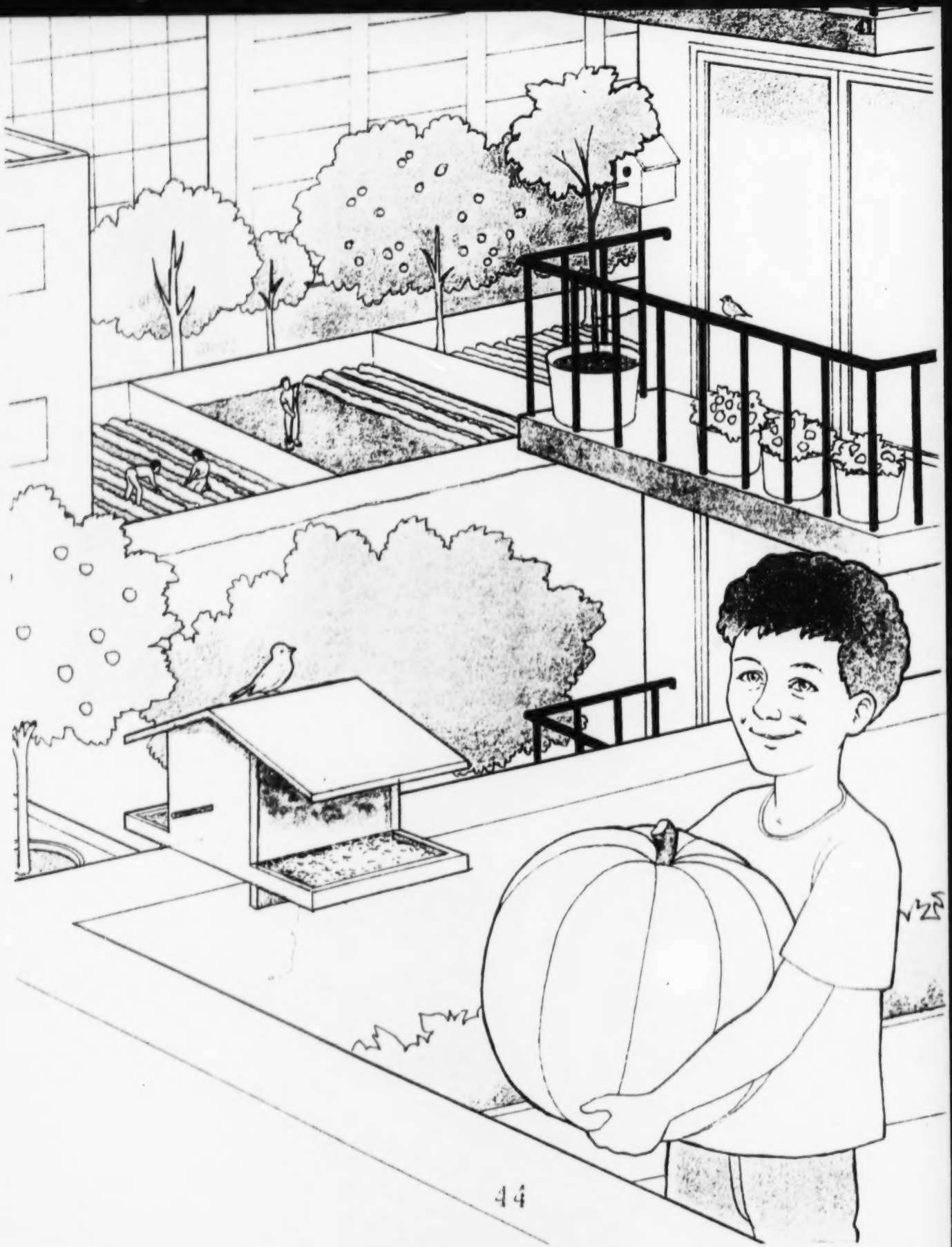
VEGETABLES.

When you eat carrots, peas and potatoes you are eating parts of certain plants called vegetables. Out of the thousands and thousands of different kinds of plants that grow on Earth, only a few of them are good for people to eat.

It's easy to plant a vegetable *garden* even if it is only a small one in a window box. Buy some seeds, follow the directions on the back of the package, water them regularly and watch them grow! Don't forget to feed your vegetables *compost*.

Growing a vegetable garden can save your family money. It can help you *recycle* your kitchen scraps, leaves and cut grass. Growing a garden is interesting and can be a lot of fun. Fresh vegetables taste good!





W is for...

WATER.

All living things are partly made up of water and all living things need water to live. The reason Earth looks blue from outer space is that much more of Earth is covered by water than by land. Water stores the heat from the sun better than the ground does and helps keep Earth warm enough for plants and *animals* to live on.

Clean water is precious. In many places there is not enough good drinking water for plants, people and other animals. That's why people must *conserve* water by using it carefully and by not *polluting* it.

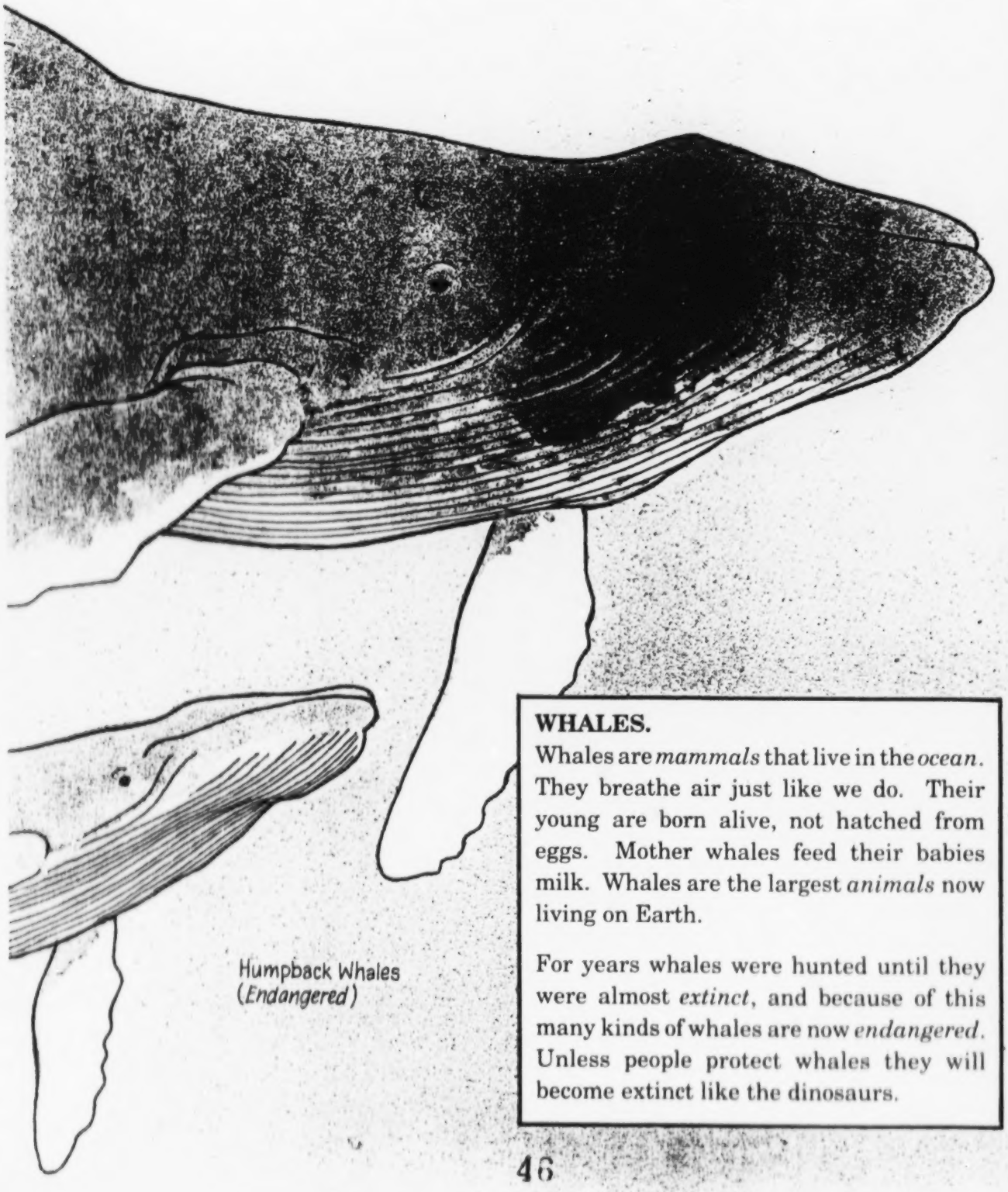
I can conserve water by turning it off when I am not using it.

WILD.

Animals not taken care of by people are called wild animals. Pigeons and sparrows are wild *birds*. Squirrels and lions are wild animals. Plants not grown in gardens or on farms are wild. Dandelions and sagebrush are wild plants. Most kinds of plants and animals in the world are wild.

People must save wilderness areas so wild plants and animals will have undisturbed places to live.

I can help save wilderness areas and parks.



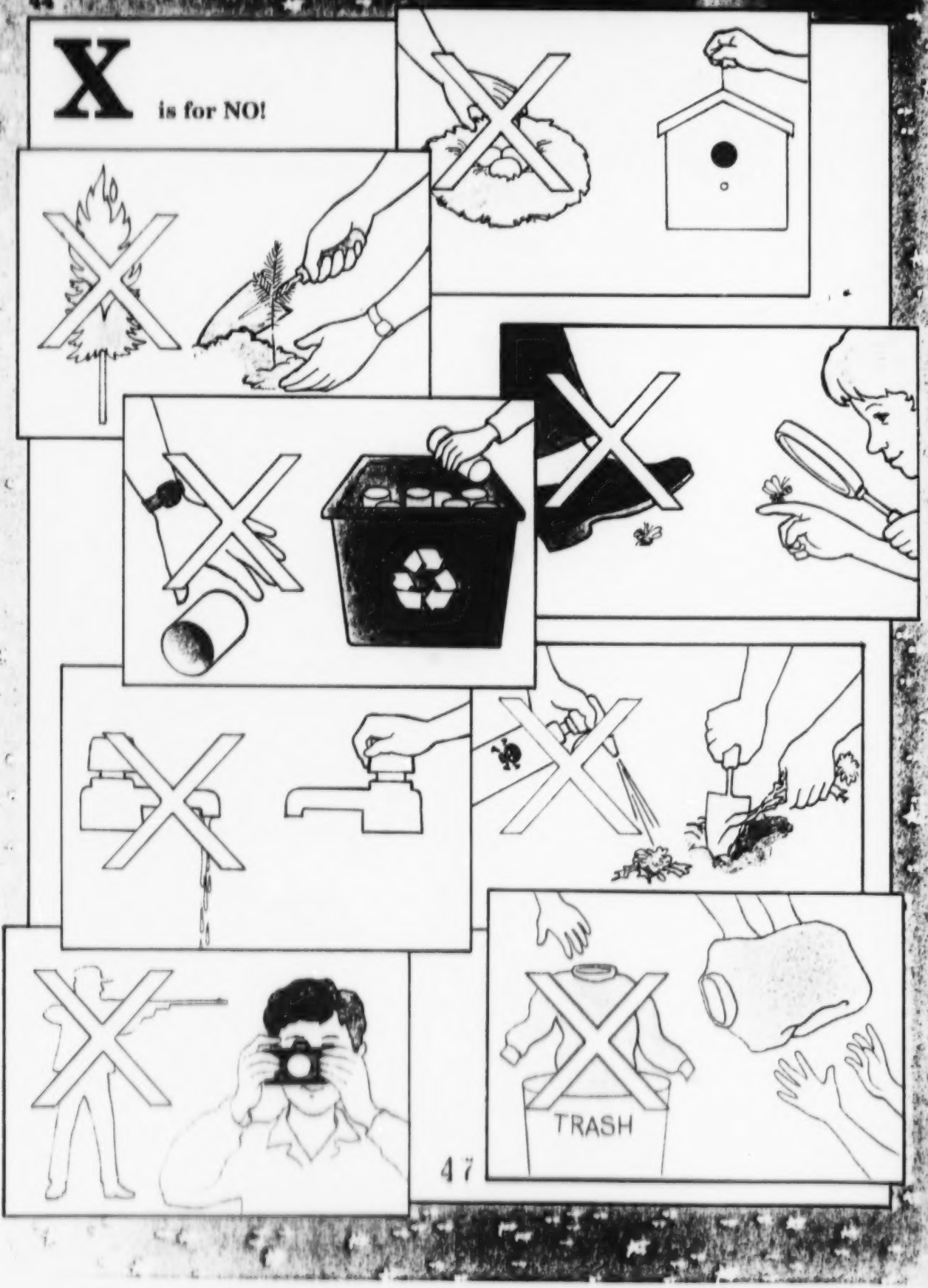
Humpback Whales
(*Endangered*)

WHALES.

Whales are *mammals* that live in the *ocean*. They breathe air just like we do. Their young are born alive, not hatched from eggs. Mother whales feed their babies milk. Whales are the largest *animals* now living on Earth.

For years whales were hunted until they were almost *extinct*, and because of this many kinds of whales are now *endangered*. Unless people protect whales they will become extinct like the dinosaurs.

X is for NO!



Y is for...

YEAR.
Every time you have a birthday you become one year older. How long is a year?

A year is the length of time it takes Earth to make one complete *cycle* around the sun. An Earth year is 12 months or 365 1/4 days long. A year might seem like a long time to you, but it is a very short time compared to how long it takes *nature* to make a mountain or a river canyon.

Here are some of the things that happen on Earth in one year:

• Every year there are 90,000,000 (90 million) more people on Earth and every one of them needs food, clothing and a place to live.

• Every year more than 8,000 different kinds of plants and *animals* become *extinct* because people are cutting down *forests*, damming rivers and building cities.

• Every year billions of tons of *pollution* go into the Earth's *atmosphere* from exhaust from cars, smoke from factories and the burning and clearing of forests.

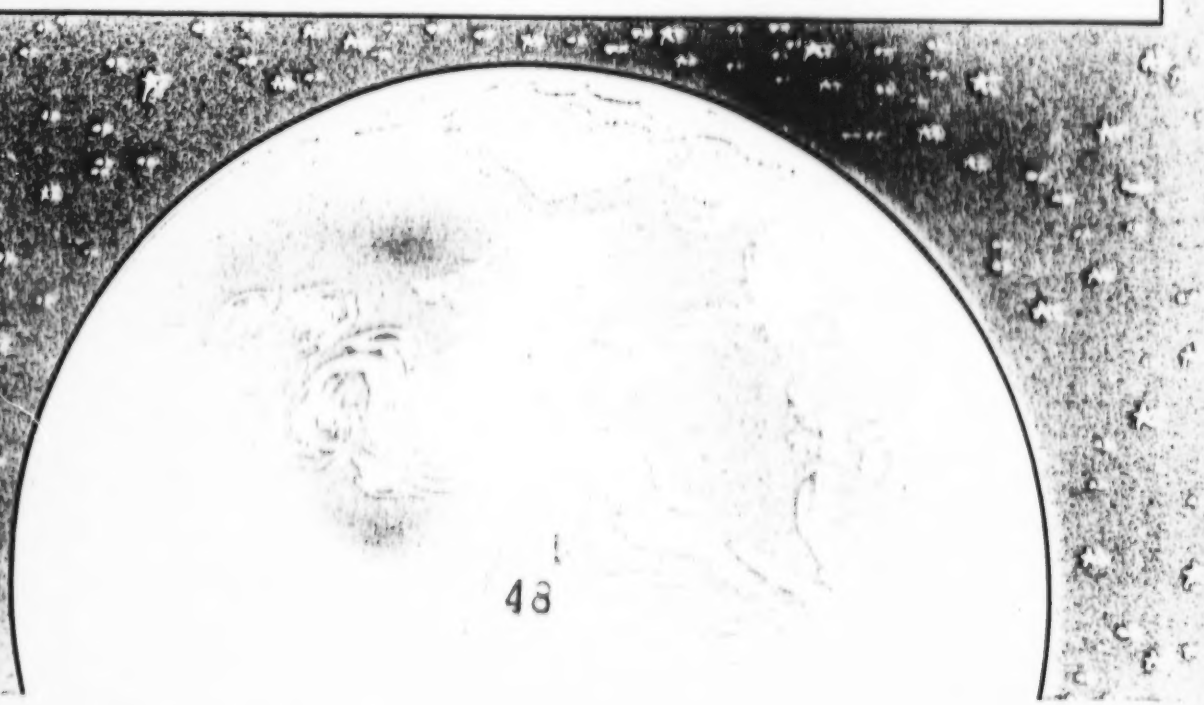
• Every year 250,000,000 (250 million) acres of tropical rainforest are cut down. That's almost 250 million city blocks or the size of England.

AND

• Every year more and more *kids* and adults are learning how they can save *energy* and *resources*!

• Every year more and more kids and adults are learning how they can help stop pollution and protect the *environment*!

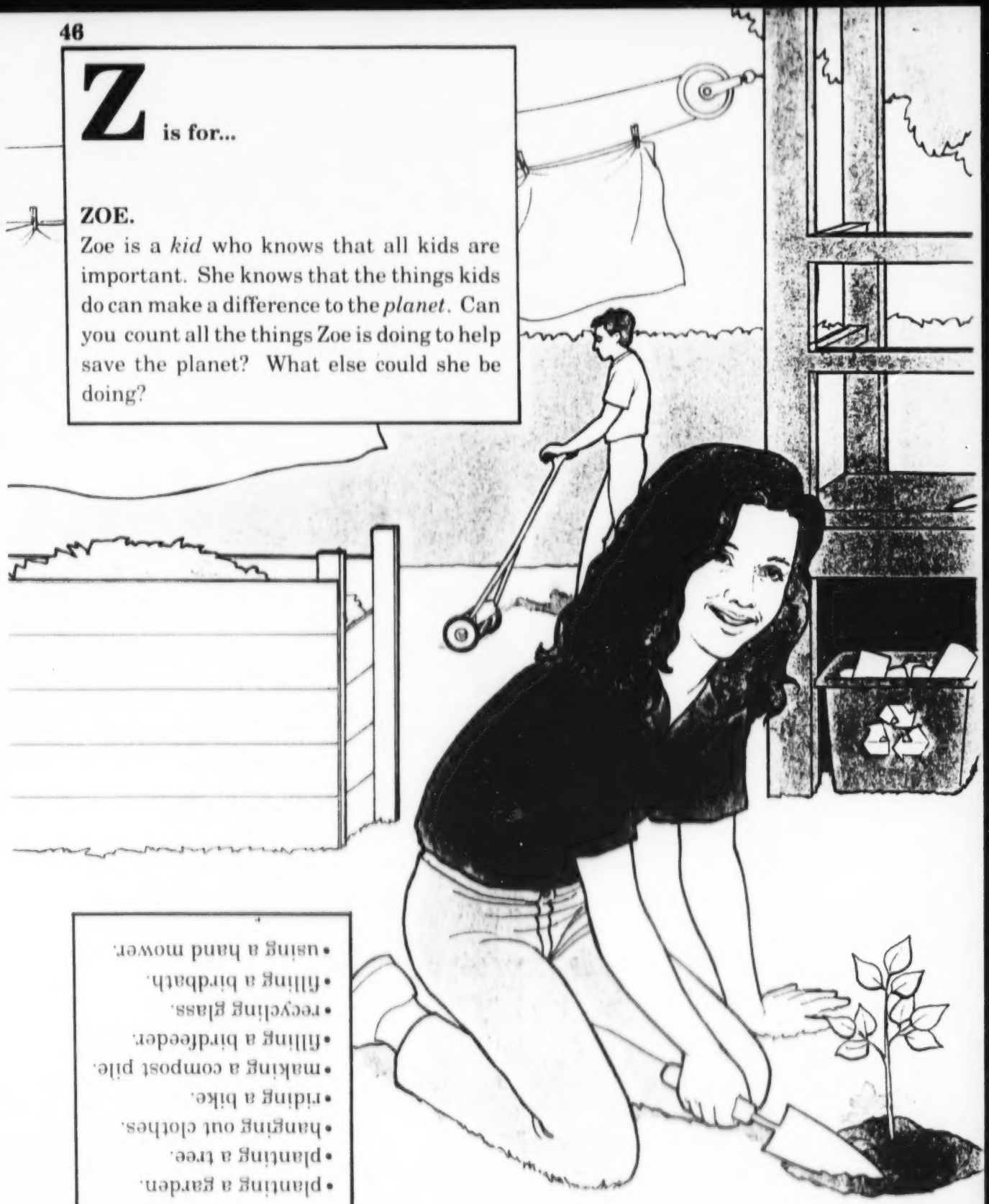
• Every year more and more kids and adults are learning about our special *planet* Earth and are helping to save it!



Z is for...

ZOE.

Zoe is a *kid* who knows that all kids are important. She knows that the things kids do can make a difference to the *planet*. Can you count all the things Zoe is doing to help save the planet? What else could she be doing?

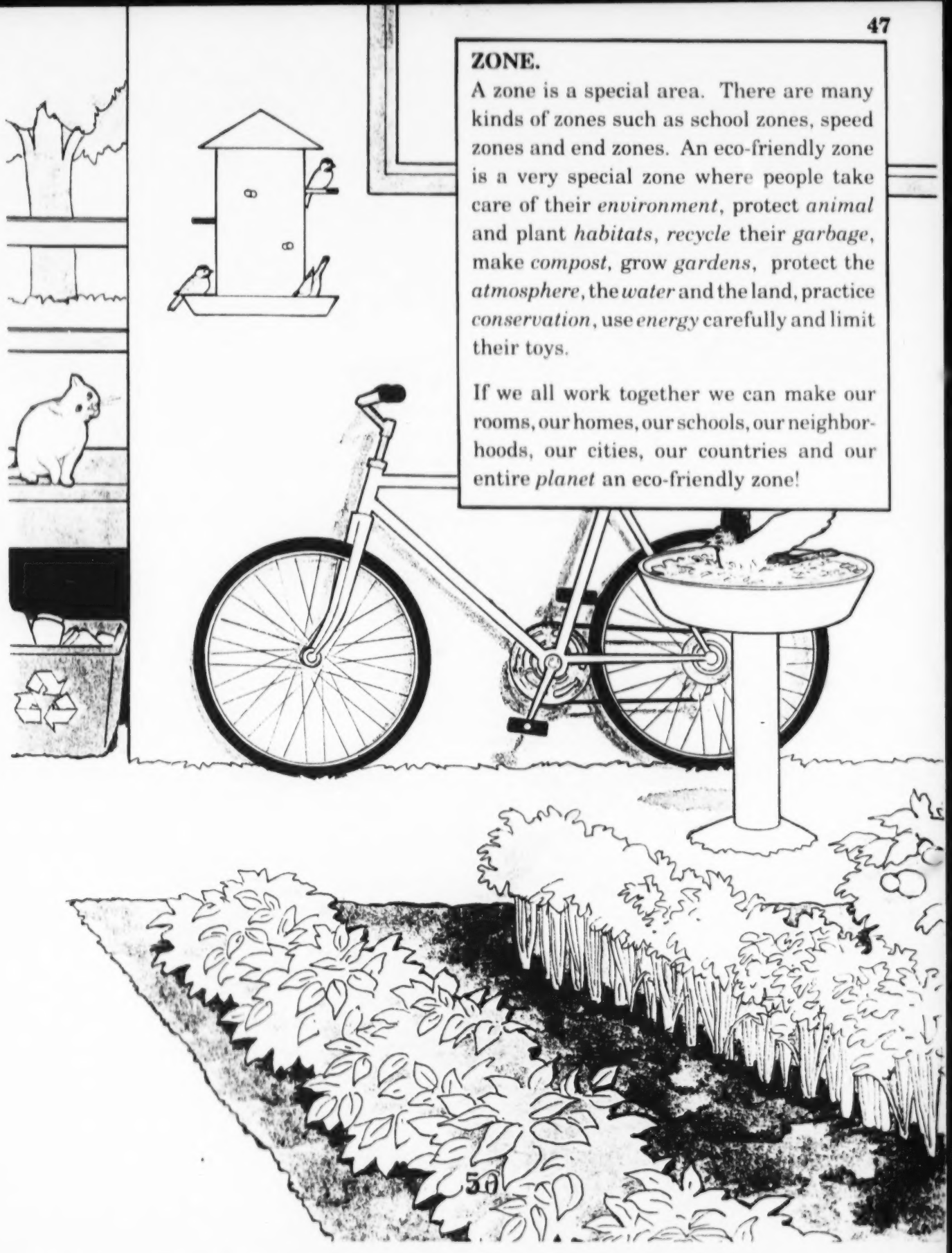


- planting a garden.
- planting a tree.
- hanging out clothes.
- riding a bike.
- making a compost pile.
- filling a birdfeeder.
- recycling glass.
- filling a birdbath.
- using a hand mower.

ZONE.

A zone is a special area. There are many kinds of zones such as school zones, speed zones and end zones. An eco-friendly zone is a very special zone where people take care of their *environment*, protect *animal* and plant *habitats*, *recycle* their *garbage*, make *compost*, grow *gardens*, protect the *atmosphere*, the *water* and the land, practice *conservation*, use *energy* carefully and limit their toys.

If we all work together we can make our rooms, our homes, our schools, our neighborhoods, our cities, our countries and our entire *planet* an eco-friendly zone!



KIDS LIKE YOU

Not so long ago, when your parents and grandparents were kids like you, the pace of life was slower. The problems that the older generation created could be solved by the younger generation when it grew up.

Now, as one kid put it, "We don't have time to wait to grow up to do something about environmental problems. We must convince our parents' generation to begin to solve the problems of deforestation, extinction, the greenhouse effect and pollution now. If they don't, by the time we're adults it may be too late."

Kids learn at school that problems are solved step by step. Kids learn that no matter how small a step is in the right direction, it helps solve a problem, no matter how big that problem might be. This means that every positive thing a kid does to help the environment is important. By not wasting electricity, by recycling and by being satisfied with less, kids like you will help create a healthy, clean world with a secure place for all the beautiful wild plants and wild animals - and for people too.

By learning about ecology, kids like you will help convince adults that environmental problems are important and must be confronted and solved now. By setting good examples kids like you will help others change the way they do things. When kids like you take the first step, other kids will follow, and so will adults.

Paul George
Founder of Western Canada Wilderness Committee